

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.

L Number	Hits	Search Text	DB	Time stamp
10	4	714/4.ccls. and DSL	USPAT	2004/06/08 12:45
11	243	714/4.ccls. and backup	USPAT	2004/06/08 12:45
12	21	714/4.ccls. and backup and dial	USPAT	2004/06/08 12:46
13	831	714/4.ccls.	USPAT	2004/06/08 12:46
14	390	714/43.ccls.	USPAT	2004/06/08 12:46
16	8	714/43.ccls. and DSL	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/08 12:47
17	0	714/57.ccls. and DSL	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/08 12:47
18	4	714/57.ccls. and dial and backup	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/08 12:47
19	25	714/57.ccls. and backup	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/08 12:47
-	505	connection adj monitor	USPAT	2004/06/08 12:45
-	54	connection adj monitor and Internet	USPAT	2003/11/26 15:33
-	626	DSL and monitor	USPAT	2003/11/26 15:33
-	488	DSL and monitor and connection	USPAT	2003/12/18 17:07
-	14	DSL.ti. and monitor and connection	USPAT	2003/11/26 15:36
-	107	xDSL and modem and dial-up	USPAT	2003/11/26 15:41
-	350	(xDSL DSL ADSL SDSL) and modem and dial-up	USPAT	2003/11/26 15:41
-	52	(xDSL DSL ADSL SDSL) and (dial-up adj modem)	USPAT	2003/11/26 15:44
-	86	(xDSL DSL ADSL SDSL) and (telephone adj modem)	USPAT	2003/11/26 16:05
-	15	DSL and connection adj status	USPAT	2003/11/26 16:07
-	64	Internet and connection adj status and notify	USPAT	2003/11/26 16:09
-	22	Internet and connection adj status and ping	USPAT	2003/11/26 16:10
-	78	\$1DSL and ping and monitor	USPAT	2003/11/26 16:11
-	219	\$1DSL and ping and monitor	USPAT; US-PGPUB; EPO; JPO	2003/11/26 16:12
-	208	\$1DSL and ping and monitor and connection	USPAT; US-PGPUB; EPO; JPO	2003/11/26 16:12
-	148	\$1DSL and ping and monitor and connection and status	USPAT; US-PGPUB; EPO; JPO	2003/11/26 16:12
-	1085	709/227.ccls.	USPAT	2003/12/10 12:11
-	11	709/227.ccls. and DSL	USPAT	2003/12/10 12:17
-	42	DSL and failover	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/02 08:45
-	57	DSL and fail adj over	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:48
-	76	dial-up and fail adj over	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:49
-	453	automatic and fail adj over	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:49

-	55	automatic adj fail adj over	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:49
-	457	automatic and failover	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:50
-	119	automatic adj failover	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:51
-	9	automatic adj failover and DSL	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:51
-	35	automatic adj failover and router	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/10 12:51
-	869	709/238.ccls.	USPAT	2003/12/10 12:53
-	10	709/238.ccls. and DSL	USPAT	2003/12/10 12:53
-	25	709/238.ccls. and \$1DSL	USPAT	2003/12/10 12:54
-	97	\$1DSL and (failover (fail adj over))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 12:56
-	1626	\$1DSL and dial-up	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 12:56
-	205	\$1DSL and dial-up and backup	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 12:57
-	24	\$1DSL and dial-up and failover	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 12:59
-	298	\$1DSL and dial-up and redundant	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 13:17
-	320	709/239.ccls.	USPAT	2003/12/10 13:55
-	1	connection adj monitor and DSL	USPAT	2003/12/10 13:56
-	61	dial adj backup	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/18 17:07
-	2	(dial adj backup) and DSL	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/18 17:07
-	3026	709/224.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/02 08:46
-	7	709/224.ccls. and (failover (backup adj connection)) and (\$DSL)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/02 08:47

-	55	709/224.ccls. and (failover (backup adj connection))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/02 08:50
-	726	709/221.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/02 08:50
-	14	709/221.ccls. and (failover (backup adj connection))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/02 08:50

Set	Items	Description
S1	4580187	CLIENT? OR STAND()ALONE? OR STANDALONE? OR PC OR PERSONAL(-)COMPUTER? OR WORKSTATION? OR WORK()STATION? OR NODE? OR USER?
S2	1609015	SEND? OR TRANSMIT? OR TRANSMISSION?
S3	18887	PING OR PNG OR PACKET()INTERNET()GROPER?
S4	4136905	(SERVER? OR PROCESSOR? OR HOST? OR NODE? OR PC OR PERSONAL-)COMPUTER? OR WORKSTATION? OR WORK()STATION? OR CLIENT?)
S5	39703	("NO" OR "NOT" OR NON)() (RESPONS? OR ANSWER? OR ACKNOWLEDG? OR REPLY OR REPLIES)
S6	16763794	CONNECTION? OR BUS? ? OR LINK? ? OR COMLINK? ? OR HANDSHAK? OR CIRCUIT? OR LINE? ? OR CABLE? ? OR PATH? OR ROUT? ? OR WI- RE? ?
S7	1750347	DEFECT? OR FAILURE? OR FAULT? OR MALFUNCTION? OR DEFAULT? - OR DETERIORATION OR DEGRADATION OR ERROR? OR INVALID OR INOPE- RATIVE OR BAD
S8	4522815	BACKUP? OR BACK?()UP? OR DUPLICAT? OR SECOND OR SPARE OR A- DDITIONAL
S9	4379844	INITIALIS? OR INITIALIZ? OR START? OR PREPAR?
S10	31415	FAILOVER OR FAIL()OVER OR FALLBACK OR FALL()BACK OR (BACKUP OR BACK()UP)()CONNECTION?
S11	113029	DSL OR XDSL OR ADSL OR SDSL
S12	287	S1 (S) S2 (S) S3 (S) S4
S13	1885	S1 (S) S3 (S) S4
S14	3208	S5 (S) S7 (S) S7
S15	51186	S8 (S) S6 (S) S9
S16	3	S13 (S) S14 (S) S15
S17	7	S13 (S) S14
S18	81	S13 (S) S15
S19	196	S10 (S) S11
S20	2	S13 (S) S19
S21	86	S16 OR S17 OR S18 OR S20
S22	53	S21 NOT PY>2000
S23	37	S22 NOT PD>20000927
S24	35	RD (unique items)
S25	35	S24 (S) S3
File	15:ABI/Inform(R)	1971-2003/Dec 15 (c) 2003 ProQuest Info&Learning
File	810:Business Wire	1986-1999/Feb 28 (c) 1999 Business Wire
File	647:CMP Computer Fulltext	1988-2003/Dec W2 (c) 2003 CMP Media, LLC
File	275:Gale Group Computer DB(TM)	1983-2003/Dec 12 (c) 2003 The Gale Group
File	674:Computer News Fulltext	1989-2003/Dec W1 (c) 2003 IDG Communications
File	696:DIALOG Telecom. Newsletters	1995-2003/Dec 15 (c) 2003 The Dialog Corp.
File	624:McGraw-Hill Publications	1985-2003/Dec 12 (c) 2003 McGraw-Hill Co. Inc
File	636:Gale Group Newsletter DB(TM)	1987-2003/Dec 12 (c) 2003 The Gale Group
File	16:Gale Group PROMT(R)	1990-2003/Dec 12 (c) 2003 The Gale Group
File	160:Gale Group PROMT(R)	1972-1989 (c) 1999 The Gale Group
File	553:Wilson Bus. Abs. FullText	1982-2003/Nov (c) 2003 The HW Wilson Co

...wish there were a way for it to quantify the packet loss as a percentage. (Most Internet **connections** have some occasional packet loss.) The only way packet loss has been visible to me is in...
...of e-mail messages, which arrived as partials. Yesterday, Flashcom called me and performed a full-bore **line** test. The conclusion was that my **line** seems OK, but that I am building up considerable packet loss. Their presumption is that there's...

...modem"). A technician is due to arrive tomorrow afternoon to install a new one and check my **connections**. (Looks like I'm going to have to dismantle the firewall du jour.) I'll let you...

...Especially given that Verizon (new name for Bell Atlantic) has been out on strike, and the local **lines** all belong to them. Back to the TopCounter Points - Flashcom Gaffe. Last week I said that Flashcom appeared and Flashcom subscriber begs to differ: "I've been a Flashcom DSL **user** for over a year now, but my contract still isn't up. Believe me, I wish it...

...of customer service gaffes by this company. One of the people who received the e-mail has **started** a newsgroup on Egroups.com called FlashCON for people to subscribe to as a way of expressing...

...could be broadband content, broadband tips or news, performance testing, utilities, you name it. Drop me a **line**. Please include the URL to the site, and tell me briefly what you liked about it. Thanks...

...to see how fast it downloads then I delete it. "What've you downloaded with your broadband **connection** that'd turn your 56-kbps friends green with envy? Be sure to include a **link** to the site, a short description, and the download file size in MB. Thanks! Back to the...

25/3,K/4 (Item 3 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02432077 SUPPLIER NUMBER: 65161522 (USE FORMAT 7 OR 9 FOR FULL TEXT)
One Day In Redmond. (One Day In Redmond, A day with Microsoft explodes some DataCenter myths. Plus, scanner woes.) (News Briefs)
Yegulalp, Serdar
WinMag.com, NA
August 9, 2000
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 2397 LINE COUNT: 00177

TEXT:

...of something you can go into a store buy off the shelf. You can get Windows 2000 **Server** or Professional from CompUSA there, but if you want to get DataCenter, you can only buy it...

...For one, it decreases the pointing-fingers problem. Many NT admins know this one: Something in their **server** fails, so they call up the manufacturer. The manufacturer insists it's a Microsoft problem. Microsoft insists...

...that I think has been most misreported -- the fact that it is not being offered as a **standalone** product, but as a service. It's not intended to be something you can simply slap into a **PC** and hope it works; the whole point of building the hardware around the software, complete with custom...

...kind, or upgrade hardware. With this in mind, Microsoft worked to make DataCenter support clustering and automatic **fail - over** for up to four **nodes**. (They did a survey and found that 2-4 **nodes** really seems to be upper limit for this sort of thing; more than 4 **nodes** would be difficult to manage and would provide a diminished return on cost.) So the enemy isn't...

...is a way to offset that, and they showed us an amusing demo that featured a four- **node** cluster running a stock-trading application. They yanked the plugs on two of them, and had the applications in question pick up nicely on the remaining two **nodes** within a minute of downtime, with no loss of transactions. What's all this mean to someone...

...people who are planning, say, to drop a quarter of a million dollars for a new corporate **server** and want to make sure they're getting something that goes up and STAYS up, barring everything...was to try and break into what is essentially a closed market -- the high-end UNIX-dominated **server** space. There are two ways they can do this: one, new customers; two, attract customers whose existing...

...com shakeout is in full force right now -- meaning that there will probably be a lot less **startups** in the next couple of years (and I'm kind of grateful for that). The real 900...

...of Sun's monolithic boxes vs. DataCenter's scale-up/scale-out orientation -- scale-up meaning adding **processors** to an existing box and scale-out meaning adding boxes to a cluster. But the most realistic...

...I've used anywhere, and I cannot recommend it highly enough, especially if you're on a **cable** modem or **DSL** or other "always-on" Internet **connection**. I found, to my dismay, that ZoneAlarm behaves very strangely after applying Service Pack 1 -- it doesn't allow ANY **connections** through when set to the highest security mode. The solution, which is temporary, is to set Internet security from "High" to "Medium." This will still block **hostile** attacks and will prevent nosy crackers from getting access to NetBIOS or other resources, so it doesn't...

...keep getting an error message when accessing certain things. The error message is: Snap-in failed to **initialize**. Name: RAS Dialin - **User Node** ExtensionCLSID: {B52C1E50-1DD2-11D1-BC43-00C04FC31FD} "After I click on the OK button, everything continues as normal. One place I get this message when I go to the Control Panel, and then **Users** and Passwords - Advanced - Advanced **User** Management, however it appears in some other administrative tools that I have installed. I know that this...on any computer. --SY)3. "I downloaded Windows 2000 Service Pack 1 and it wiped out my **connection** to my **cable** modem. I spent four days trying to fix the problem. I talked to the service Techs at...

...but no one could solve the problem. I finally did a reinstall of Windows 2000 and my **cable** modem was **back up** and running. Strangely enough I was able to **ping** in and out to any site (DOS (command- **line**) mode) but the operating system was unable to interface with the modem. Please let me know if...

...s backfiring? What say you, readers? DLC Causes Windows 2000 BSOD Apparently if you use the DLC (Data **Link** Control) network protocol in Win2K Pro and **Server**, you may get a Blue Screen of Death (kernel dump) crash occasionally. I personally don't use...

25/3,K/5 (Item 4 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02432031 SUPPLIER NUMBER: 65161446 (USE FORMAT 7 OR 9 FOR FULL TEXT)
We Demand Broadband Reliability! (News Briefs)
Finnie, Scot
WinMag.com, NA
July 6, 2000
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 4676 LINE COUNT: 00355

TEXT:

IN THIS ISSUE We Demand Broadband Reliability! Broadband Garage --
Linksys Firewall Is Super! WorldSpy Died, Long Live WorldShare.net Podium -

086577

Dive into your LAN without getting soaked

Intellimax Systems' LanExplorer 3.6 software protocol analyzer gives you a deeper look at your network.

Byline: BOB CURRIER, NETWORK WORLD TEST ALLIANCE

Journal: Network World Page Number: 32

Publication Date: August 21, 2000

Word Count: 1140 Line Count: 104

Text:

... are modest; we successfully ran the analyzer on a Toshiba Satellite 1625 laptop with an AMD-K6 **processor** and 128M bytes of RAM. LanExplorer supports most network interface cards, but this isn't an area...

... usually need them, but when you do, you really need them. Workaday network testing applications such as **ping**, traceroute and nslookup generally suffice for the majority of troubleshooting. However, when you're faced with a...

... display their contents can mean the difference between solving the problem and scratching your head. When you **start** LanExplorer, you're presented with the main console window, a neatly laid-out collection of icons and...

... the console contains the Traffic, Statistics and Alarm panels. The Traffic panel provides tables and charts for **Hosts**, Matrix (**host**-to-**host** traffic) and TCP/**User** Datagram Protocol (UDP) port statistics. We spent most of our time using the **Hosts** table and were pleased with the ability of LanExplorer to hyperlink Web sites it detected. If we noticed a surge in traffic from a **host** we were interested in, we could fire up Microsoft's Internet Explorer by clicking on the **link**. This feature was a great timesaver because it kept us from having to manually enter complicated URLs...

... segments. We also monitored several remote sites that were connected to the backbone by asymmetric DSL or **cable** modem. LanExplorer performed well at each location but began dropping packets when presented with a high volume...

... decoding the communications between the handset and call manager, and the transition to UDP packets when the **connection** was established. With the convergence of voice, video and data rapidly becoming a hot topic, the ability...

... function notified us of several events that were occurring on the network segment under examination. LanExplorer detected **duplicate** IP addresses and flagged them for us, and pointed out that a large number of plain-text Post Office Protocol 3 passwords were flowing across the **wire**. While the majority of LanExplorer's tables and displays were nicely formatted, the charts tended to get crowded and unreadable when displaying a large number of **hosts** or protocols. We would have liked the ability to limit the number of displayed items on each...feature we didn't like: Out of the box, LanExplorer comes configured to automatically disconnect the current **user** when another remote session is established. It was disconcerting to have our capture session get blown away...

...another technician connected to the box. Once we adjusted the settings - an easy menu selection - to notify **users** that the remote probe was already in use, our sessions went swimmingly. If you need an inexpensive...

25/3,K/11 (Item 3 from file: 674)

DIALOG(R) File 674:Computer News Fulltext

(c) 2003 IDG Communications. All rts. reserv.

086278

Stop 'em with a box

Let your remote workers set it and forget it

Byline: DAVID STROM

Journal: Network World Page Number: 48

Publication Date: August 07, 2000

Word Count: 2762 Line Count: 246

Text:

... attackers, they think of firewalls. Firewalls offer the best and most basic form of isolating internal network **users** from the big, bad outside world of the Internet. Of course, any solution will involve more than...

... price, features and ease of use. And with the growing use of DSL and other 'always on- **connections** for corporate teleworkers and small-office, home-office (SOHO) computers, the need for simple firewalls will continue ...

... of firewalls are on the market these days, ranging from software-only products running on commonly available **PC** parts to units that cost tens of thousands of dollars for enterprise-level security. For this review...
... four-port hubs included and run an embedded operating system. The other three are built around common **PC** parts running some variation of the Unix operating system, and offer **connections** for keyboards and monitors. The Unix boxes have more features but are limited by their simplicity. Our...

... the best of the bunch. And at \$495, it represents a terrific value. Coming in a close **second** was WatchGuard's SOHO, a very basic unit without many features but the simplest setup around. We...

... s a chore to set up. The GNAT Box offers plenty of features and a variety of **user** interfaces to configure them, but you should probably wait until new firmware that offers several ease-of...

... skimpy documentation and poorly designed menus. There are other firewall-type products that cost less: A five- **user** version of the GNAT Box software is freely available from the company's Web site, and Linksys ...

... considering one of the more expensive units. Setup and configuration. Because of our focus on nave network **users**, we placed a heavy emphasis on the initial **user** experience out of the box. The WatchGuard SOHO firewall was the fastest to set up, taking less...
... way you first have to change the default password. This is often something many more experienced computer **users** overlook and one that can compromise your network security. It was also the only unit not to...

... SonicWall SOHO and WatchGuard's SOHO have configuration screens with a simple check box to disable Microsoft **Server** Message Block protocol's network broadcasts across the firewalls, one of the biggest security hazards for small-office **users** who want to share files among themselves but not necessarily across the Internet. The other products could...

... was involved. Setting up the GNAT Box required us to spend time in each of its three **user** interfaces (Web, Windows and telnet command **line**), while the NetFortress required numerous e-mails and phone calls to the vendor's support staff. Part...

... determine what was going on with the unit. This isn't something you'd want an inexperienced **user** to fool with if something went wrong. Management features. We attempted to do several typical management tasks on ...

... upgrade the firmware, change the network configuration to let incoming requests be directed to a specific Web **server** on the protected network, review reports and reset the unit back to its factory settings. Firmware upgrades... clever HTML programming on the unit's home page whether or not its firmware is still current. **Second** prize goes to Interceptor, which

had a simple menu choice (once you registered with the vendor and received a **user** name and password) to perform the upgrades. SonicWall SOHO's upgrade walks you through the process, but...

...have to locate the new firmware file on the company's Web site, download it to your **PC** and then upload it to the unit. The GNAT Box is more complex and cumbersome, involving creating...

...drawback. With WatchGuard SOHO and SonicWall SOHO it was very easy to set up a public Web **server** on the protected network (meaning you could access it from the Internet). This can be handy in...

...where workgroups wish to share documents among each other temporarily or to set up a permanent Web **server** in a remote branch office location. This was more difficult to set up on the other units...

... if you have set up a configuration that can compromise your security (such as giving all external **users** full access to the resources on the protected network). WatchGuard SOHO can send its logs to a remote log **host**, but they are very basic (and because the unit was behind our DSL router, its time-stamp...

... Box and SonicWall SOHO were the easiest to set back to their factory defaults -useful when a **user** messes up the initial configuration or for a technician to debug problems. Interceptor and NetFortress can't...

... specific antivirus software on each individual computer. While we tested the dual-Ethernet units only, the three **PC** /Unix-based vendors (Interceptor, NetFortress and GNAT Box) offer a variety of flexible interface configuration options, such as token ring, frame relay, T-1 and ISDN. We think most **users** will want to run Dynamic **Host** Configuration Protocol (DHCP) **servers** on their firewalls, making it easier to dole out IP addresses to the rest of their network. Both the SonicWall SOHO and WatchGuard SOHO have DHCP **servers** that were simple to set up. Unfortunately, the Interceptor box doesn't let you initially set it...

... with the Windows-based wizard and then, when the box is up and running, enable the DHCP **server** with the Web interface. That isn't very nice. Getting the NetFortress DHCP **server** to work took numerous support calls. And GNAT Box won't include a DHCP **server** until its next version, 3.1.0, available later this summer. All of the firewalls enabled Network...

... access. Once they were set up, by default they prevent all external access and allow all internal **users** full access to the outside. You can set up **additional** rules ...support for blocking access to particular Web sites by specific URL lists input by administrators. For an **additional** fee, these three also enable the use of a blocking service to set up this feature by...

... of this feature, as it is cumbersome to maintain and can be easily circumvented by more knowledgeable **users**. Documentation By far the best documentation was from WatchGuard -a single printed page. Everything else comes from the...

... site, including careful and concise instructions with plenty of screen shots to guide even the most inexperienced **user** through the process. WatchGuard can get away with this because the product has a limited number of...

... much of a step up from reading Unix manual pages, in terms of the wording of command- **line** examples and in their lack of clarity. It also suffers from a very terse table of contents...

... the concepts could use a better explanation, and some of the examples will be difficult for inexperienced **users** to follow. The quick- **start** brochure that comes with SonicWall SOHO is far superior to the one from Interceptor. It is clearer...

... other point we should mention when it comes to documentation is how the various network ports and **cables** on each unit are labeled -or not, as the case may be. WatchGuard SOHO and SonicWall SOHO...

...the other three. The GNAT Box and NetFortress don't indicate anywhere on the device what network **connection** is for the protected inside network, and which one is for the external network. And while Interceptor...

... match the menu setup screens on its Web interface. They also include a variety of different-colored **cables** in its unit. There was some confusion over two red **cables** -one a regular Ethernet **cable** and the other a crossover **cable**. A better solution would be just to make the crossover **cable** an entirely different color. These seem like small points, but both can be big stumbling blocks when supporting remote **users** who have to take instructions from network administrators via e-mail and the phone. Strom was the...

... Ethernet network composed of five Windows computers running Windows 98 and NT and a Cobalt Qube Web **server**. We then connected each device to an external network and the public Internet via a Flowpoint DSL router. We tried to set up each firewall to connect as a Dynamic **Host** Configuration Protocol **client** to our external network, and to act as a DHCP **server** for the protected network. (Some of the devices don't support DHCP services, however.) One of the Windows computers running NT **Server** Version 4 was used to configure the firewall via Microsoft's Internet Explorer and Netscape Navigator, as...

... the firewall. We also tried to upgrade the firmware on each device and tested whether all Microsoft **Server** Message Block network packets were blocked from outside access. Finally, we ran Gibson Research's Shields Up (www.grc.com) to determine outside network vulnerabilities, as well as trying to **ping** and telnet to each firewall from the outside and inside networks.

25/3,K/12 (Item 4 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

085368

Remaking Honeywell

Legacy firm morphing into e-biz wiz.

Byline: CAROLYN DUFFY MARSAN

Journal: Network World Page Number: 1

Publication Date: June 26, 2000

Word Count: 1945 Line Count: 188

Text:

... an Internet venture. Forget cubicle and corner offices. Honeywell's e-Business Caf will feature Starbucks coffee, **Ping**-Pong tables and personal gardening plots when it opens in September. The walls will be multicolored, and...

... with information on pension plans, 401 (k) savings plans and other benefits. A massive integration effort that **links** customer and employee Web sites with back-end finance, manufacturing and engineering systems. Central to this e...

... have an infrastructure impact. "So far, Honeywell's reinvention efforts appear successful. Prudential Securities ranks the company **second** of nine multi-industry global manufacturers, trailing only General Electric, in terms of its adoption of e...

... into the business-to-business e-commerce arena. "Honeywell is taking existing applications and moving to a **hosted** model to allow knowledge workers to do different things through this Web access," says Rebecca Kaske, director... Web site from home on off-hours. In fact, the company

hopes to announce soon an employee PC purchase plan that will provide low-cost home PCs with Internet access. But the main reason for...

...this year, McMeekin estimates Honeywell's Global Business Services group is linking the e-hubs, which are **hosted** off-site by GTE, with legacy systems and new enterprise resource planning software from SAP, Oracle and ...

... the next six months, the company will introduce firewall software from Check Point Software running on Sun **servers** and a private-key infrastructure from Nortel Networks at all its locations. "Eventually, as we are done...

... support of MyHoneywell. com. In the past, employees had to access Honeywell's networks via dial-up **connections**. Soon they will be able to access the site directly from their ISP, which will be faster...

... network security equipment costs, but he admits that Honeywell is "spending multimillions upgrading our network infrastructure to **prepare** for explosive growth." The next challenge for Park's group is bandwidth capacity management. Honeywell has already increased its network bandwidth significantly over the past 18 months, upping the **connection** at its main data center in Tempe, Ariz. 24-fold by replacing a T-1 **line** with a T-3. Other **connections** range from 256K bit/sec to T-1 **lines**. Honeywell is analyzing traffic patterns and redesigning its network architecture to use these **connections** most efficiently. "We will end up with 16 separate ISPs around the world," Park says. "We'll...

25/3,K/13 (Item 5 from file: 674)
DIALOG(R) File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

083702

**Nortel and Lucent compete for air time
Ready to rumble!**

Byline: Marguerite Reardon

Journal: Network World

Publication Date: April 25, 2000

Word Count: 810 Line Count: 77

Text:

...domination of the fiberless optical networking market. Lucent and Nortel have both struck deals with fiberless optical **startups** -- ones that sell products that use lasers to transmit high-speed voice and data through the air rather than over fiber **cable**. But the companies they have sided with have different takes on the technology, which makes this an...

... airfiber.com, which itself announced its first products -- called OptiMesh -- this morning. Nortel provided AirFiber with its **second** round of financing, and has been working with the vendor on product development since last August, it...

... s technology uses a point-to-multipoint design, in which subscriber terminals located in the windows of **users'** offices beam traffic to and from a base station sitting atop a service provider's building. AirFiber...

... the other hand, is the first vendor to support a fully meshed architecture -- one in which traffic **ping**-pongs round the network between multiple base stations sitting on top of customer and service provider buildings...

... should provide a more reliable network, one in which traffic can be routed around downed equipment and **links**. (AirFiber says its products come with software that detects outages and a built-in ATM switch that then reroutes traffic to another **node** in the mesh). Both vendors' implementations -- point-to-multipoint and mesh -- are streets ahead of

traditional fiberless...

... throughput. However, a look under the hood reveals that the capacity of the network is shared among **users**. Depending on the number of subscribers in a given area, that means TeraBeam could actually deliver lesser throughput than AirFiber. AirFiber's products support 622 Mbit/s **connections** -- and each of those **links** is dedicated to each **user** in the network. "If a customer orders an OC-3's worth of bandwidth, then that's...

... couldn't do terabit speeds -- one day," says George W. Soderquist, president, International Communications Electronics Group, a **startup** based in Mesa, Arizona, that's developing 155 Mbit/s point-to-multipoint 40 GHz microwave equipment...

25/3,K/14 (Item 6 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

081645

Dining with DNS

Two expert chefs cook up tasty domain name applications.

Byline: TOM HENDERSON

Journal: Network World Page Number: 61

Publication Date: February 21, 2000

Word Count: 1669 Line Count: 150

Text:

Dealing with Domain Name System (DNS) is a simple proposition for most **users**; they hardly know it exists unless it stops working. Browsers and mail **clients** seem to find the appropriate service effortlessly - on a good day. But when things go bad, you...

... We tested Men&Mice Software's DNS Expert, a diagnostic tool that analyzes your existing domain name **server** and other network qualities, and Incognito Software's DNS Commander, a domain name **server** and management system that replaces the Windows NT DNS service or a DNS **server** on another platform. DNS Expert is well-suited for a system administrator with more than a few name **servers**, or with several domains and zones. By contrast, DNS Commander helps you implement your first DNS **server** or manage a number of primary and secondary **servers**. Because DNS Expert is an analysis tool and DNS Commander is a management tool, we didn't...

... is relatively simple: translate cryptic IP addresses into more easily remembered domain names and vice versa. DNS **servers** must respond quickly to queries. That makes it impractical to carry the entire domain database at local sites. Instead, each **server** - except at the very top (also known as a root **server**) - carries just the portion of the database that's germane to its site, or zone. The service takes queries and refers them to upstream DNS **servers** until it hits a **server** that can resolve the query. To eliminate another source of delay, DNS **servers** hold many entries in a memory cache, in order to make a disk request unnecessary. The name...

...to create entries that cause an immense number of problems when spoofed, or erroneous entries that point **users** beyond cyberspace. Site hijacking and other problems can result when pernicious updates are made. DNS Expert to...

... an analysis tool for DNS. It has three levels of tests (minimal, normal and thorough) and some **additional** tools to aid in analysis. When we tested DNS Expert, we found that very few of the...

...center of a small ISP - on the backbone of the insecure/Internet side of the ISP's **connection** using "thorough" weight analysis - the strongest testing value of the software. DNS Expert turned up some real errors and some red herrings: The ns3.corplink.net **server** only accepts transfers from specific addresses and, therefore, cannot be spoofed unless someone figures out how to...

servers and our Network Appliance Filer. We added all this to SiteScope. After a month, we had our results: Name Uptime % **Error** % Warning % Last(Graphics) Web **Server** 99.14 0.85 0.00 good(Graphics) NetApp Filer 99.23 0.76 0.00 good(Graphics) Akamai 100.00 0.00 0.00 good Name Measurement Max Avg Last(Graphics) Web **Server** round trip time 3.25 sec 0.34 sec 0.29 sec(Graphics) NetApp Filer round trip...

...its alert capabilities. You can set it up so that if x% of your monitors is in **error** for more than y minutes, SiteScope will send an e-mail alert. We have it set to...

... helps us monitor our providers' networks. We even use SiteScope within Fool HQ to monitor our Exchange **server**, intranet **server**, and the CPU, RAM, and NIC usage on a couple of **servers**. This helps our internal operations techies monitor the health of our LAN. As you can tell, there...

25/3,K/22 (Item 14 from file: 674)
DIALOG(R) File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

074518

Management on the cheap

Here are 10 network and systems management tools that are free (or awfully close to it).

Byline: JEFF CARUSO

Journal: Network World Page Number: 51

Publication Date: May 10, 1999

Word Count: 1103 Line Count: 99

Text:

Consider the simple, nearly ubiquitous utility called **ping**. It's a network manager's first reflex, the first tool in the toolbox. Need to know if a **server** is reachable over a network? **Ping** it. **Ping**, however, is just one of many useful and free management utilities readily available to network managers. In...

... you have. It's surprising how much free stuff is available. In addition to utilities such as **ping** and traceroute that ship with Unix and other operating systems, shareware and freeware management tools abound. Many...

...Some managers use the tools in conjunction with major network management software. Others use them as a **backup** system if the management platform fails. Still others depend on the tools everyday. "In the old days, telnet, File Transfer Protocol, lping0 and traceroute were about all you needed to keep a small IP network running smoothly," says Mike...

... the University of Mississippi. Over the past 20 years, the school has grown from a few hundred **nodes** to 13,400 **connections**. "Contrary to what you might think, I still rely heavily on these simple tools," Myrick says. He...

... vendor tools such as Cabletron's Spectrum, Concord's Network Health and Network Associates' Distributed Sniffer with **ping**, traceroute, mon and swatch. Here are 10 management tools that can get you **started** managing on the cheap, in no particular order. This is not an all-inclusive list - in fact...

... other tools you swear by, let us know by e-mailing us at jcaruso@nww.com. 1. **Ping** (of course) **Ping**, which some say stands for **Packet InterNet Groper**, has been around since 1983. The program lets you know if one device can reach another over a network. **Ping** does this by sending an echo request using Internet Control Message Protocol. This free utility has been...

... Unix variants, and Windows NT and 95. 2. Traceroute Another common utility is traceroute. It's similar to **ping**, in that traceroute demonstrates if a packet can make it from one device to another. But

traceroute also displays the **route** the packet takes through the Internet and the time it takes to get from one hop to...

...are the greatest and where trouble spots may exist. 3. MRTGMRTG monitors the traffic load on network **links**. The software collects traffic data from routers via SNMP and displays the data in a graph on...

... Sistema Operativo (QueSO) is a utility that can tell you what operating systems are running on remote **hosts** by sending TCP packets that don't make sense to the **host**. Standards don't define how operating systems should respond to nonsensical packets, so each operating system has...

... and lets you know if it finds a match. 6. NmapLike QueSO, nmap scans the network for **hosts**, revealing what operating system and services those **hosts** are running. Nmap sends out parallel pings to all **servers** on a network to see which ones are up, and it scans for TCP ports to see what services - such as e-mail and Web pages - are available on the **server**. 7. TcpdumpThe Unix utility tcpdump prints out the headers of packets that go through the computer's...

... using a certain TCP port number. 8. MonMon is software that can monitor network resources, watching for **server** problems and ensuring that services such as Web pages and e-mail stay available. Network managers can ... devices go down, and generates reports on the information. Network managers often use the product as a **backup** to other commercial network management systems. There are plenty of other free utilities available, including some on...

25/3,K/23 (Item 15 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

073620

10 things you're paying too much for

Byline: Network World staff

Journal: Network World Page Number: 1

Publication Date: April 05, 1999

Word Count: 2223 Line Count: 195

Text:

... haveto be so expensive. Here are ten waysto save. By Network World
Staff Tip 1: Spiff up **servers** IT pros often look for a quick fix. If data access is slowing down, for instance, the...

... boost performance for about \$11,000, according to Dell. Now what do you have? A beefed-up **server** at half the price of a new one. Tip 2: Switch off for savingsWill turning off your **PC**, monitor and printer save money? Let's do a back-of-the-envelope calculation. Figure each **PC** uses 200 watts per hour, and each monitor uses about the same. An employee works nine hours...

...NRC) - seems justified. But don't expect to avoid the fee if you already have a network **connection** and are looking for a **second** permanent virtual **circuit**, or if you are seeking a new call-routing feature on your voice virtual private network, or...

... the length of your contract. Tip 4: Avoid NT sticker shock Here is a little advice for **users** considering swapping their NetWare **servers** in favor of Windows NT. If you care about money, don't do it. Analyst firms Giga...

... Cambridge, Mass., and Gartner Group of Stamford, Conn., say moving your NetWare 3.X or 4.X **servers** to NT 4.0 could end up costing three times as much in terms of hardware and administration costs than upgrading to NetWare 5.0. To provide the same **server** uptime, NT requires bigger boxes - and more of them - than NetWare. Additionally, you will need more bodies ...

... be a cost-effective move because the company currently employs only one CNE to manage 20 Novell **servers**, compared with the 45 engineers it would need to track 200 NT boxes. Tip 5: T-1...

... that's certainly still true if you go by their tariffed pricing. But an increasing number of **users** are getting flat-rate T-1 deals from major interexchange carriers. To hang on to your business...

... AT&T's and MCI WorldCom's points of presence. So carriers know you'll probably send **additional** voice and data traffic exclusively to them until you've nearly filled the T-1. Don't... Cheap T-1s to the 'Net. If you think you're paying too much for your Internet access **connection**, you're probably right. Some ISPs are charging steep prices for a full T-1 pipe. But be advised: You're not locked into choosing UUNET (about \$2,500 per month, \$5,000 setup), **Cable** & Wireless (\$1,700 per month, \$300 setup) or Concentric Network (about \$1,800 per month, \$3,000...

... per month for 1.544M bit/sec of dedicated access. Compared with expensive ISPs, such as UUNET, **users** can save more than \$2,000 per month by choosing a wireless ISP such as Airwire.net...

... a one-time installation fee of \$1,850 and cost \$400 or \$500. Tip 7: Put your **clients** on a diet. You may be spending too much for end-**user** computing. Over two years, National Semiconductor slashed its annual desktop total cost of ownership by more than...

... to about \$3,300. Figure nearly \$4,300 in savings for each of National's 7,400 **users** and you're talking about a major chunk of money - about \$32 million. National defined a standard desktop **PC** outfitted with the company's own inexpensive Cyrix chip and carrying a price tag of roughly \$600. The **PC** communicates with **servers** that run Windows applications on top of Citrix Systems' WinFrame software, a multiuser version of Windows NT. The **servers** are from Dell and cost about \$20,000 apiece. National expected big software purchase savings but didn't get them, says Bob Neuberger, who manages National's thin-**client** technologies. The savings didn't stack up because most vendors still issue software licenses per-desktop rather...

... Distributing new software now takes just hours instead of months because it's loaded on a few **servers** instead of each desktop. In fact, some departments now update their software weekly. Because desktops have little with which end **users** can monkey, technical support costs have dropped, and **user** productivity has risen, though again, this is hard to quantify. Tip 8: Slash e-comm costs. If electronic...

... man's desktop procurement product is Trilogy Software's Buying Chain, which costs \$4,995 for 500 **users**. Tip 9: Avoid the toll trap. Do you ever pick up the phone, dial a number that you...

... or other switch to deal with these calls, you're bound to be paying more for these **connections** than for calls across the country. The explanation for this has nothing to do with technology and...

... Over the past few years, most states have allowed interexchange carriers to carry this traffic. But many **users** have not reset the programming tables ... only need to know how well your applications are performing, for instance, there are software packages that **start** at less than \$10,000 from the likes of NetScout and Ganymede. Also, don't forget some of the basic shareware tools that are available. These resources include **ping**, which checks if a device is available, and tcpdump, which provides data on TCP from a Unix...

Nutter's Help Desk: Private vs. public IP numbers

Journal: Network World

Publication Date: March 15, 1999

Word Count: 394 Line Count: 38

Text:

... questions. Call (800) 622-1108, Ext. 476, or send your questions to helpdesk@networkref.com. We are **preparing** to implement TCP/IP on our network. One of the questions that has come up is whether...

... addresses today. But in order to use private and public IP addresses, you'll need a proxy **server** or other device, such as a firewall, that provides Network Address Translation (NAT). NAT extends proxy service-like functionality to some e-mail **clients** and other applications that don't include a configuration setting for talking through a proxy **server**. This enables such applications to communicate over the Internet. In addition, NAT devices can serve as less...

... your Web site, the NAT device would intercept the attack and prevent it from affecting the Web **server**. Internal **users** on the company network would still be able to access the Web **server**. Use of private IP addresses, which need to follow the specifications outlined in RFC 1918 (found at...

... which can be used without registration. Use of such private IP addresses also will give you an **additional** layer of security. Hackers will have a harder time entering your network because Internet routers commonly discard packets used in **ping** and other hacker attacks if those packets are destined from an IP address in one of the...

... then keeps a table of what private address is talking to what public address so it can **route** incoming traffic to the appropriate destination.

25/3,K/25 (Item 17 from file: 674)

DIALOG(R) File 674:Computer News Fulltext

(c) 2003 IDG Communications. All rts. reserv.

073051

Too much, too soon

This scaled-down Unicenter component for general network management isn't scaled down enough.

Byline: Bob Carrier

Journal: Network World

Publication Date: March 15, 1999

Word Count: 1352 Line Count: 126

Text:

... generally available in January, needs to shed a few pounds. Despite the unbundling of applications such as **backup**, security and systems management, NetworkIT Pro still feels more like its hefty parent than the scaled-down...

... objects, including performance information gathered by the RMON analysis application. A polling engine monitors bandwidth utilization and **node** response time as well as application-specific information including end-to-end response times, delays between the **user** and the application and application traffic flow. In addition to reporting, you can configure NetworkIT Pro's...

... and alerts to the central Event Console, thus limiting the amount of information passing across the WAN **link**. Discovery Channel NetworkIT Pro's database is initially populated by running the application's autodiscover feature. Once the...

... search for devices on the network. You have a choice of using Fast ARP, ARP Cache, ICMP **ping** sweep or DNS search to probe the network. The product displays a process meter that allows you...

... We found the need to run multiple discovery processes to be confusing and time-consuming. After discovery, **Path Doctor** helps you diagnose the health and performance of the **path** between two network **nodes**. **Path Doctor** requires that all **nodes** in the **path** between the systems being tested have a community name string of "PUBLIC" and a subnet mask of...

...doesn't use a "PUBLIC" community name string, has different subnet masks and has several wide-area **links** with hardware that we don't manage or configure. Installing agent software on every **node** isn't practical; without it, we were unable to get **Path Doctor** to provide us with more than an icon of each endpoint. We found **Path Doctor** to be of limited use in a heterogeneous network, especially one that's not managed by...

... to use report navigator. Installing **NetworkIT Pro** is fairly straightforward, but there are a few quirks that prospective **users** should be aware of. **NetworkIT Pro** requires Microsoft SQL **Server** 6.5, service patch 3, but doesn't check for it until after the installation process begins and requires you to go back and add **additional** components at a later time, while Custom allows you to select the entire package. We strongly recommend ...

...had locked up, and unnecessarily cancel the entire process. Documentation **NetworkIT Pro** comes with a printed "Getting **Started**" guide and an online collection of reference manuals. We found the Getting **Started** manual to be of only moderate help. It provides descriptions of what **NetworkIT Pro** can do, but not much information on how to do it. Getting **Started** made repeated references to the online manuals, but we found these to be little more than standard...

... picture of your network makes this product less than effective. Some of the utilities, such as Super **Path Doctor**, make unrealistic assumptions about the network environment. Overall, the product suffers from a lack of cohesiveness...

... and the 1998 Grand Prize winner in the Excellence in Campus Networking competition sponsored by CAUSE, a **user** group for computer professionals in higher education. He can be reached at robert.currier@duke.edu. Currier ...

25/3,K/26 (Item 18 from file: 674)
DIALOG(R) File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

073045

Nutter's Help Desk: Public or private IP numbers?

Journal: Network World

Publication Date: March 15, 1999

Word Count: 393 Line Count: 36

Text:

... questions. Call (800) 622-1108, Ext. 476, or send your questions to helpdesk@networkref.com. We are **preparing** to implement TCP/IP on our network. One of the questions that has come up is whether to...

... addresses today. But in order to use private and public IP addresses, you'll need a proxy **server** or other device, such as a firewall, that provides Network Address Translation (NAT). NAT extends proxy service-like functionality to some e-mail **clients** and other applications that don't include a configuration setting for talking through a proxy **server**. This enables such applications to communicate over the Internet. In addition, NAT devices can serve as less...

... your Web site, the NAT device would intercept the attack and prevent it from affecting the Web **server**. Internal **users** on the company network would still be able to access the Web **server**. Use of private IP addresses, which need to follow the specifications outlined in RFC 1918 (found at...

... that can be used without registration. Use of such private IP addresses also will give you an **additional** layer of security. Hackers will have a harder time entering your network because Internet routers commonly discard packets used in **ping** and other hacker attacks if those packets are destined from an IP address in one of the...

... then keeps a table of what private address is talking to what public address so it can **route** incoming traffic to the appropriate destination.

25/3,K/27 (Item 19 from file: 674)
DIALOG(R) File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

072808

Selecting an ISP 102: Preparing the RFP

Motley Fool

Byline: DWIGHT GIBBS

Journal: Network World

Publication Date: March 08, 1999

Word Count: 2702 Line Count: 230

Text:

... elbow. Further, you should have a pretty good idea of what kind of service you need to **host** your site. This column will cover the next step in the process: Creating the Request for Proposal...

...to get them to bid for your business. Be aware that if you will have one small **server** **hosting** a few static pages with pictures of your cats, you're not going to get a lot of attention from ISPs. On the other hand, if you're looking at 50 **servers** pushing 40M bit/sec of traffic, expect lots o' love from the ISPs. Happily, it's a...

... other. Hardware In this section, specify the hardware that you will use for your site such as **servers**, switches, load balancers and anything else you can think of. Don't forget to include the brand, model number and configuration of each device. Software Outline the operating system(s), Web **server** (s), application **server**, e-commerce applications, chat applications, log analysis applications, utilities, etc. that you will use to run your...

... will be offering. Also detail the services you will need from the ISP such as database administration, **backup** and load balancing. The key in the "" "What You've Got" "" section is managing expectations. Let the...

...System (UPS) that also conditions the electrical supply to the farm. The UPS should have enough battery **backup** to hold the farm up long enough to **start** the diesel generator in the event of a power outage. Whoa, did I just lose you at...

... If it's a dirt road, you're gonna have problems. You can have the most powerful **servers** in the world at your site but without a capable network in front of them, it won't. To ask for an up-to-date network map from each ISP. This should include the current **links** and speeds as well as planned **links** and speeds (with delivery dates). Always ask for their future plans. If they don't have any...

... and run tests on the network. Related to this, make sure to get some IP addresses of **servers** in the ISP's Web farm. You can run trace routes to these **servers** to check network performance. NOC Each ISP should have a 24x7x365-network operations center. This is the facility that monitors the ISP's network and the **servers** in its Web farms. If there is a problem, the NOC staff will be the ones to...

... it or call in people who can. The NOC is very important, as it is the first **line** of defense for detecting and fixing problems. If an ISP does not have a 24-hour NOC...

...do they do the monitoring? What tools/software do they use? How often do they check the **servers**? Do they do simple **ping** checks or do they request pages and look for specific text in the pages? What are the...

...up? Ask some questions. How knowledgeable is the NOC staff? How many NOC staffers are there per **client** and per **server**? This will give you a feel for how much attention your site will get. How many engineers are on-site during business hours and during off-hours per **server** and per customer? Technical support Each ISP should have a technical support division of which the NOC...

...often called a Technical Account Manager -- TAM) or will you get whoever is on duty? How many **servers** / **clients** is each TAM responsible for? Do they have a trouble ticket system? Can you access it? What...

... only care about getting the information they need when they want it. Will the ISP handle all **backups** including tape rotations and off-site storage? Will the ISP provide log analysis tools? If so, which package...

... questions to ask include: How long has the ISP been in business? How long has it been **hosting** Web sites? How long has it been **hosting** your type of configuration (operating system, Web **server**, hardware, etc)? If the answer is "" "as soon as you sign up," "" move along. You should also...

... 20 customers are using. If these configurations are nothing like yours, be concerned. Ask what percentage of **servers** and customers in its farm is Unix (broken down by flavor) vs. NT. If it is heavily...

... contrast to the current customers' point of view. You should also talk to friends and peers who **host** Web sites to see what they think about their ISPs. And you should check Usenet for general...

... surprises are not appreciated by anyone. The pricing should be broken down by megabyte of data transferred, **server** /rack and hour of service. Each ISP should include a la carte pricing for each service they...

... try to rent me a single IP address for \$100 per month! That is ridiculous and truly **pathetic** price gouging. After a little negotiating (read: yelling), the price dropped to a \$250 one-time charge...

25/3,K/28 (Item 20 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
(c) 2003 IDG Communications. All rts. reserv.

071402

Striking back

Corporate vigilantes go on the offensive to hunt down hackers.

Byline: Winn Schwartau

Journal: Network World Page Number: 1

Publication Date: January 11, 1999

Word Count: 2349 Line Count: 210

Text:

...to launch the attack with graphics and messages, causing them to crash. The incident raises issues all **user** organizations will soon have to grapple with, if they haven't already. When you detect a break...

...to keep investigations quiet? If not, don't corporations have a right to defend themselves? Some emboldened **user** organizations are answering "yes." They are striking back against hackers, sometimes with military efficiency and intensity, in...

... have the right to self-help - and yes, it's vigilantism," he says. "We are drawing a **line** in the sand, and if any of these dweebs cross it, we are going to protect ourselves...

... part of its information security practice, Ernst & Young has been asked about strike-back capabilities and how **hostile** perimeters might be used

Online videogaming and gaming will be...

25/3,K/32 (Item 3 from file: 696)
DIALOG(R)File 696:DIALOG Telecom. Newsletters
(c) 2003 The Dialog Corp. All rts. reserv.

00692290

Software

CTI NEWS

September 21, 1999 VOL: 3 ISSUE: 19 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: PHILLIPS BUSINESS INFORMATION

LANGUAGE: ENGLISH

WORD COUNT: 598

RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...imcnetworks.com

Product name: ipMux

Type of product: High-speed Ethernet IP Multiplexer.

Platform: Connects directly to **personal computers** via standard Ethernet NICs.

Target customer: ISPs, telcos, cable carriers and LAN administrators.

Price: \$1,600 starting...

...Turnkey system for creating, maintaining and archiving e-mail messages.

Platform: Runs on Windows NT 4.0 **Server** .

Target customer: Businesses, government agencies, IT managers.

Price: \$35,000

Available: Now

Contact person: Gloria Alvarado, 714...

...or IDSL interface. As

the market adopts new technologies in the future, Motorola plans to introduce other **DSL** versions to support an even broader customer base.

Quicknet Technologies Inc.

Website: www.quicknet.net

Product name...

...Platform: Windows 95/98, Windows NT 4.0, and Linux

Target customer: small businesses and SOHO computer **users** .

Price: \$159.95

Available: November

Contact person: Cathleen Bleers, 847/955-0700, ext. 228

Description: The Internet...

...Internet telephones with hardware-based echo cancellation, full-duplex audio, and speakerphone capability. With Internet PhoneJACK - PCI, **users** simply pick up the telephone to make an Internet phone call, or answer the phone when it...IP connection (patent pending)

to provide exceptional speed, bandwidth and utility along with BOOTP address resolution, Telnet, **PING** , TFTP and SYMON's IP JumpStart utility.

VPNet Technologies Inc.

Website: www.vpnet.com

Product Name: VSU...

...500 simultaneous VPNs. It

features 4 Ethernet ports for resilient and flexible network topologies, as well as **fail - over** protection, multi-unit proactive switching support and redundancy of cooling fans and power supplies.

...

Set	Items	Description
S1	71528	CLIENT? OR STAND()ALONE? OR STANDALONE? OR PC OR PERSONAL(-)COMPUTER? OR WORKSTATION? OR WORK()STATION? OR NODE? OR USER?
S2	7066	SEND? OR TRANSMIT? OR TRANSMISSION?
S3	235	PING OR PNG OR PACKET()INTERNET()GROPER?
S4	54718	(SERVER? OR PROCESSOR? OR HOST? OR NODE? OR PC OR PERSONAL-)COMPUTER? OR WORKSTATION? OR WORK()STATION? OR CLIENT?)
S5	38	("NO" OR "NOT" OR NON)() (RESPONS? OR ANSWER? OR ACKNOWLEDG? OR REPLY OR REPLIES)
S6	26275	CONNECTION? OR BUS? ? OR LINK? ? OR COMLINK? ? OR HANDSHAK? OR CIRCUIT? OR LINE? ? OR CABLE? ? OR PATH? OR ROUT? ? OR WI- RE? ?
S7	6523	DEFECT? OR FAILURE? OR FAULT? OR MALFUNCTION? OR DEFAULT? - OR DETERIORATION OR DEGRADATION OR ERROR? OR INVALID OR INOPE- RATIVE OR BAD
S8	7787	BACKUP? OR BACK?()UP? OR DUPLICAT? OR SECOND OR SPARE OR A- DDITIONAL
S9	8187	INITIALIS? OR INITIALIZ? OR START? OR PREPAR?
S10	370	FAILOVER OR FAIL()OVER OR FALLBACK OR FALL()BACK OR (BACKUP OR BACK()UP)()CONNECTION?
S11	460	DSL OR XDSL OR ADSL OR SDSL
S12	15	S1 AND S2 AND S3 AND S4
S13	1	S5 AND S6 AND S7
S14	719	S8 AND S9
S15	0	S12 AND S14
S16	0	S12 AND S10
S17	9	S14 AND S10
S18	1	S12 AND S11
S19	25	S12 OR S13 OR S17 OR S18
S20	20	S19 NOT PY>2000
S21	19	S20 NOT PD>20000927

File 256:SoftBase:Reviews,Companies&Prods. 82-2003/Nov
(c)2003 Info.Sources Inc

21/5/1

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

01511153 DOCUMENT TYPE: Product

PRODUCT NAME: Novell StandbyServer for NetWare 5.3 (511153)

Novell Inc (344893)
1800 S Novell Pl
Provo, UT 84606 United States
TELEPHONE: (801) 861-7000

RECORD TYPE: Directory

CONTACT: Sales Department

Novell's StandbyServer 5.3 for NetWare (R) provides networks with **failover** capabilities between primary NetWare servers and standby servers. Employing StandbyServer 5.3 for NetWare, IT administrators can limit network downtime and increase system availability. The product uses IP or IPX (TM) protocols to mirror data from primary to secondary servers. The system also can mirror data from primary to multiple **backup** servers. Data is updated in real time. Novell StandbyServer for NetWare streamlines file copying and replication. Its Open Data-Link Interface communications protocols allow the system to run on different platforms. The product monitors network and server links, verifying that the primary server is working properly. Monitoring eliminates inadvertent server switchovers caused by client, network, or communications problems. If software or hardware fails, Novell StandbyServer for NetWare automatically **initializes backup** servers as primary servers, employing the same server name, login script, IPX address, and other information. The product integrates with the off-site Archive for NetWare disaster recovery system.

DESCRIPTORS: Fault Tolerance; LANs; Network Administration; Network Servers; Network Software; WANs

HARDWARE: IBM PC & Compatibles
OPERATING SYSTEM: NetWare
PROGRAM LANGUAGES: Not Available
TYPE OF PRODUCT: Micro
POTENTIAL USERS: Cross Industry
PRICE: Available upon request

REVISION DATE: 20021217

21/5/2

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

01015911 DOCUMENT TYPE: Product

PRODUCT NAME: MapOptix 3.0 (015911)

GeoNorth LLC (687766)
921 SW Washington #777
Portland, OR 97205 United States
TELEPHONE: (503) 827-0827

RECORD TYPE: Directory

CONTACT: Sales Department

GeoNorth's MapOptix (TM) 3.0 puts map and database information on the Web, without the need for programming. It works with **users** ' existing software, such as ODBC-compliant databases and the ArcIMS geographical information

system (GIS), and does not require plug-ins or applets. With MapOptix, authors can add zoomable, pannable maps with completely customized interfaces to their Web site. Features of MapOptix 3.0 include an unlimited number of map layers; ColdFusion-based custom reporting; **user** -set map layer ordering; **user** -defined scale dependencies; remote access for administrators; the ability to **send** JPEG, GIF, or **PNG** images to **clients** ; **user** security profiles; buffering; map legends; map metadata; a choice of map-scale units; and an intuitive map **server** with logging, monitoring, and other administrative features.

DESCRIPTORS: Authoring Systems; Content Management; Database Publishing; Electronic Publishing; GIS; Mapping; Web Site Design

HARDWARE: IBM PC & Compatibles

OPERATING SYSTEM: IIS; Internet Explorer; Netscape; ODBC; Windows

PROGRAM LANGUAGES: ColdFusion; Proprietary Languages

TYPE OF PRODUCT: Micro

POTENTIAL USERS: Geographical Information System (GIS) Users, Cross Industry, ArcIMS Users, M related Web Site Owners

DATE OF RELEASE: 10/2000

PRICE: Available upon request; Internet demo available

DOCUMENTATION AVAILABLE: Source code; online documentation

OTHER REQUIREMENTS: 64MB RAM; Explorer 4+ or Netscape 3+; IIS 4+; ColdFusion 3.1+;

REVISION DATE: 20021030

21/5/3

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.

(c)2003 Info.Sources Inc. All rts. reserv.

00124811

DOCUMENT TYPE: Review

PRODUCT NAMES: Company--NaviSite Inc (867802)

TITLE: Breadth of expertise defines ASP start -up

AUTHOR: Johnson, Amy Helen

SOURCE: Computerworld, v34 n31 p60(1) Jul 31, 2000

ISSN: 0010-4841

HOME PAGE: <http://www.computerworld.com>

RECORD TYPE: Review

REVIEW TYPE: Company

NaviSite, a developer of Web site hosting and application services, provides the SiteHarbor product and consulting service. NaviSite has many application hosting services that allow customers and can provide total solutions for Web applications and hosting. NaviSite rents Web applications and uses advanced technologies and processes, including database system **fail - over** and e-commerce management. NaviSite also hosts events that have single-event peak capacity requirements and consults with users to provide scalable site development services. One user, Books24x7.com, says he liked NaviSite's full-service model, which is economical and provides level-of-service guarantees. Among types of consulting chosen by Books24x7.com were assistance in setting up a Cisco LocalDirector load-balancing appliance, and general advice for using SQL databases. However, the user says he might have sought another provider had his company been larger with more internal expertise and fewer requirements for outside help. For example, Exodus Communications and BBN Technologies both provide hosting services that might be suitable for other companies. An analyst says NaviSite lacks focus and operates as a 'mishmash of directions and partners,' and a **second** analyst agrees to some extent. However, the **second** analyst says NaviSite is competitive with other vendors for customer satisfaction, management vision, employee management, and name recognition.

COMPANY NAME: NaviSite Inc (663476)
SPECIAL FEATURE: Charts
DESCRIPTORS: ASP (Application Service Providers); E-Commerce; Fault
Tolerance; Web Hosting
REVISION DATE: 20020819

21/5/4

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00121224 DOCUMENT TYPE: Review

PRODUCT NAMES: Homeline Starter Kit PowerMac (784699)

TITLE: HomeLine Starter Kit
AUTHOR: Rizzo, John
SOURCE: MacAddict, v4 n12 p84(1) Dec 1999
ISSN: 1088-548X
HOMEPAGE: <http://www.imaginemedi.com>

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Netopia's (was Farallon's) Homeline Starter Kit for the PCI-based PowerMac with System 7.5.5 or higher gets excellent marks for tools that allow **users** to network Macintoshes and PCs using installed telephone wiring. Homeline Starter Kit provides all the components needed to share files, printers, and a single Internet connection among several computers. Two PCI networking cards are included in the package and can be installed in a Macintosh or PC. With more separately purchased cards, **users** can connect 25 computers. However, EtherNet is recommended for larger networks. To easily install Homeline Starter Kit, the **user** simply opens the computer, installs the card, and plugs the telephone cable from the card to the wall. Installed phones or modems plug into the pass-through connector on the card. The devices can be used while the network is active since the frequency range used by Homeline Starter Kit is different from that of standard voice and data **transmissions**. Cards use the HomePNA networking standard, which supports the majority of AppleTalk and TCP/IP software. Software is easy to install, and Auto Setup easily configures AppleTalk and TCP/IP control panels. The Farallon **Ping** utility and HomeLine Link Test can diagnose problems. Other included networking components provided are a demo version of PC MacLAN, which makes PCs compatible with AppleTalk networks, and SurfDoubler, for sharing an Internet connection via analog modem, cable modem, Digital Subscriber Line (**DSL**), or ISDN.

PRICE: \$139

COMPANY NAME: Netopia Inc (422932)
SPECIAL FEATURE: Charts Screen Layouts
DESCRIPTORS: Apple Macintosh; Data Communications; Home Automation; IBM
PC & Compatibles; LAN Alternatives; MacOS; PowerMac
REVISION DATE: 20001130

21/5/5

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00119554 DOCUMENT TYPE: Review

PRODUCT NAMES: CA-SurviveIT! (765333)

TITLE: With CA SurviveIT, You Just Can't Keep a Good Network Down
AUTHOR: Avery, Mike
SOURCE: Network Computing, v10 n16 p22(2) Aug 9, 1999

ISSN: 1046-4468
HOMEPAGE: http://www.NetworkComputing.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Computer Associates International's CA-SurviveIT!, a standby server, provides **failover** and reinstatement features for Microsoft Windows NT servers. With SurviveIT, users can mirror data between primary and secondary servers. If the primary server fails, the secondary server takes over its work. The secondary server can **start** services that enable it to more quickly fill in for the primary server should a failure occur. The Getting **Started** manual is conversational and informational, but the Administrator Guide is a better reference manual. A very good online help system is also provided. Installation during testing of a pre-release version was quick and easy, but required two reboots of the primary and secondary NT servers. The **second** reboot was required to finish the installation of CA's TNG Framework system management. In the preview release, users must install TNG Framework, which raises the total amount of hard disk space required for SurviveIT! to 213MB. However, CA says the final release will not require installation of TNG Framework. SurviveIT! runs with Windows NT running Service Pack 3,4, or 5. During a test configuration, data was synchronized immediately between servers, and when the primary server was powered down and settings were corrected with the help of technical support, the secondary server took over for the downed primary immediately.

PRICE: \$2495

COMPANY NAME: Computer Associates International Inc (081957)
SPECIAL FEATURE: Screen Layouts Charts
DESCRIPTORS: Fault Tolerance; IBM PC & Compatibles; Network Administration
; Network Servers; Network Software; Windows NT/2000
REVISION DATE: 20020630

21/5/6
DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00117735 DOCUMENT TYPE: Review

PRODUCT NAMES: Cool Mail (722278); Mr.Wakeup (761176); TTS3000 (761184)

TITLE: Today's TTS Technology
AUTHOR: Muraskin, Ellen
SOURCE: Computer Telephony Magazine, v7 n3 p82(10) Mar 1999

RECORD TYPE: Review
REVIEW TYPE: Product Comparison
GRADE: Product Comparison, No Rating

Planetary Motion's Cool Mail, Mailvision's namesake product, I- Ping 's Mr.Wakeup, Elan Informatique's ProVerbe Speech Platform, and Lernout & Hauspie's TTS3000 are among products highlighted in a discussion of currently available text-to-speech (TTS) products. Internet-enabled products are proliferating, and allow mobile workers to voice dial while traveling and to tell an e-mail reader what POP3 accounts to download or copy from, in order to hear e-mail read. **Users** also can request, via a Web site, notification when e-mails arrive, with delivery via a cell-phone or pager. The overall advantage of these features is the ability to travel without a **PC**, but to still receive e-mail by dialing an 800 number, entering a PIN number, and performing required tasks. In addition, L&H's product also knows the language of incoming e-mail and can read it back in English or the language of **transmission**. Elan's product also ships with acceptable French **transmission**. **Users** can obtain business headlines and

stock quotes. CoolMail uses the FlexTalk TTS engine from Al and allows **users** to include other POP3 accounts into a CoolMail account. Mailvision has a very flexible setup and provides outbound notification for high-priority e-mails. Mr.Wakeup is a personal reminder and wake-up service, and will soon be available in several delivery methods. ProVerbe Speech Platform is a hardware system and complies with ECTF S.100 standards, while L & H's TTS3000, which is available in several applications, runs on Windows NT and the Antares DSP board.

COMPANY NAME: Planetary Motion (652822); iRing Inc (665339); ScanSoft Inc (088358)
SPECIAL FEATURE: Screen Layouts Charts
DESCRIPTORS: Appointment Scheduling; Computer Telephony; E-Mail Utilities; Remote Network Access; Telecommunications; Telecommuting; Voice Mail
REVISION DATE: 20020422

21/5/7

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00114522 DOCUMENT TYPE: Review

PRODUCT NAMES: Linux (833916); Systems Network Architecture (SNA) (259781)

TITLE: Two new faces of Linux: SNA development ties Linux to mainframes
AUTHOR: Hohman, Robin Schreier
SOURCE: Network World, v16 n3 p1(2) Jan 18, 1999
ISSN: 0887-7661
HOMEPAGE: <http://www.nwfusion.com>

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

New code released this week will allow Linux **users** to access Systems Network Architecture (SNA) mainframe resources for the first time. The programmer in charge of the open source Linux SNA project is posting Linux tn3270 communications **client** software on the Linux SNA Project Web site. Linux **users** will be able to use the software to pull data from SNA applications, **send** it over a TCP/IP backbone, and incorporate it into Linux applications. The tn3270 technology is an industry standard, and delivers SNA 3270 data over TCP/IP backbones. The programmer, Jay Schulist, is working on Linux tn3270 **server** software and is already written drivers for several token-ring cards. In addition, mainframe connectivity vendor Bus-Tech plans to announce support for the tn3270 Linux package on its Enterprise Systems Connection Architecture (ESCON) cards. Bus-Tech cards let several **server** hardware devices connect directly to IBM's fiber ESCON channel. The combination gives Linux **users** high-speed access to SNA mainframe applications. Schulist also developed a Linux SNA version of **ping** software, used to validate that a network connection has been made. Linux to SNA connectivity is essential if Linux is to penetrate large enterprise networks.

COMPANY NAME: Vendor Independent (999999); IBM Corp (351245)
DESCRIPTORS: Data Communications; Enterprise Application Integration; Linux; Network Software; SNA
REVISION DATE: 20010730

21/5/8

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00111113 DOCUMENT TYPE: Review

PRODUCT NAMES: Clever eRoute Beta (720313)

TITLE: New software traces IP performance

AUTHOR: Songini, Marc

SOURCE: Network World, v15 n33 p20(1) Aug 17, 1998

ISSN: 0887-7661

HOME PAGE: <http://www.nwfusion.com>

RECORD TYPE: Review

REVIEW TYPE: Product Analysis

GRADE: Product Analysis, No Rating

Enterprisewide IP performance can now be tracked with Clever eRoute beta from Applied Expert Systems, a management software solution that tracks tn3270 and TCP/IP session performance and offers troubleshooting diagnosis tools. Thanks to a boom in the installed tn3270 **user** base, Clever's unique purpose and features are becoming increasingly important as enterprise traffic levels increase. Clever eRoute consists of a **server** application residing on a mainframe, and **client** applications running on any Windows **workstation** in order to view data collected by the mainframe application. System performance stats like **transmission** speeds, packet loss, and response times are tracked by **sending** out an IP command similar to a **ping** and reporting back the findings. Other features include remote network gear performance measuring, average response times, and network capacity and service-level planning information.

COMPANY NAME: Applied Expert Systems Inc (651664)

SPECIAL FEATURE: Graphs

DESCRIPTORS: Internetworking; Network Administration; Network Management; Network Software; Performance Monitors; System Monitoring; System Performance

REVISION DATE: 20020630

21/5/9

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.

(c)2003 Info.Sources Inc. All rts. reserv.

00108748

DOCUMENT TYPE: Review

PRODUCT NAMES: NIC Express (704091)

TITLE: Fault-Tolerant Servers in the NIC of Time

AUTHOR: Zimmerman, Christine

SOURCE: Data Communications, v27 n7 p54(2) May 1998

ISSN: 0363-6399

RECORD TYPE: Review

REVIEW TYPE: Review

GRADE: A

IP Metrics Software's NIC Express balances network adapters processing loads over adapter cards. This increases throughput and protects data by moving data to functional adapters if one fails. The software operates with cards from many vendors. However, if incorrect adapter drives are used, **fail - over** can take two seconds time, in which data can be lost; only Network Device Interface Specification (NDIS) 4.0 adapter drivers should be used. NIC Express runs on Windows NT servers based on Intel and DEC Alpha processors. EtherNet, fast EtherNet, and gigabit EtherNet adapters are supported, as are IP, IPX, and NetBEUI. A significant advantage of the product is its distribution of traffic over multiple adapters, for upward scaling of throughput. NIC Express has excellent fault tolerance. It can send all traffic from a port to another card, to send packets from the downed port to their proper destinations without delay. When the downed card is replaced, the new one is **initialized** in less than a **second**. NIC Express also tells network managers of problems on the network; it supports five Simple Network Management Protocol (SNMP) levels and can be monitored

remotely. Similar products are available from other vendors, including Intel and Adaptec.

PRICE: \$195

COMPANY NAME: FalconStor Software Inc (711284)
SPECIAL FEATURE: Charts
DESCRIPTORS: Alpha; Fault Tolerance; IBM PC & Compatibles; Load Balancing;
Network Servers; Network Software; Windows NT/2000
REVISION DATE: 20030925

21/5/10

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00106732 DOCUMENT TYPE: Review

PRODUCT NAMES: Guard Dog (007285); Surf Express (687979); Starfish
Internet Utilities 97 (635995); Net.Medic (663344); Oil Change (635537)

TITLE: Info Highway Tool Kit
AUTHOR: Eckhouse, John
SOURCE: HomePC, v5 n3 p98(5) Mar 1998
ISSN: 1073-1784

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Guard Dog Deluxe from CyberMedia, Surf Express from Connectix, Starfish Internet Utilities 97 from Starfish Software, Net.Medic from VitalSigns Software, and Oil Change from CyberMedia are the five most valuable programs for World Wide Web browsers. Guard Dog protects both the security of the computer and the privacy of the **user** while surfing the Internet. If Guard Dog detects a violation, it 'barks.' Guard Dog offers antivirus protection even against malicious ActiveX controls and Java applets. It protects against cookies as well and it is smart enough to know which cookies to let pass and which to block. Surf Express makes pages the **user** frequently visits available six times as fast as usual by storing them in a cache. In addition, it offers the ability to search the cache by keyword. Internet Utilities 97 help organize the links to favorite sites with QuickMarks, **send** a **Ping** to find out the path of an Internet search, or look up who owns a Web site with Whois. It also features an alarm clock. Net.Medic helps **users** pinpoint the origins of performance bottlenecks on their systems. Although it offers somewhat simple suggestions, its AutoCure button can sometimes fix the problem. Oil Change automates downloading of the latest bug fixes, patches, and updates. When possible, it will even automatically install downloads. Oil Change performs much better than TuneUp from Quarterdeck.

COMPANY NAME: Network Associates Inc (490113); Connectix Corp (470805);
Pumatech Inc (603139); Lucent NetCare (635821); Network Associates
Inc (613304)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: Computer Security; Conferencing; File Security; IBM PC &
Compatibles; Internet Security; Internet Utilities; Performance
Monitors; Security; System Monitoring; System Performance; Viruses &
Worms
REVISION DATE: 20031021

21/5/11

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00105964 DOCUMENT TYPE: Review

PRODUCT NAMES: HyperFlow SP800 (681962)

TITLE: HolonTech Puts New Spin on Load Balancing
AUTHOR: Chowdhry, Pankaj
SOURCE: PC Week, v15 n9 p91(2) Mar 2, 1998
ISSN: 0740-1604

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

HyperFlow SP800 from Holontech has the unique ability to load-balance encrypted packets, but administrators looking for pure speed and ease-of-installation should look to less expensive solutions such as Alteon Network's AceDirector. HyperFlow's unique load-balancing of encrypted packets can be performed because the product uses no IP Layer 4 information to do the balancing. HyperFlow operates completely at IP Layer 3. Because it uses Layer 3 it can balance encrypted packets based on the Internet Protocol Security standard. It is also impressive in the area of transaction integrity. It operates differently from most switch products and helps processor-intensive applications work quicker. However, HyperFlow does not support a **fail - over** box. Thus, HyperFlow introduces a single point of failure in the network, a shortcoming its competitors do not share. HyperFlow also has difficulties recognizing servers at boot-up. This could mean real trouble if the product was leaving servers in the dust when it **starts** up and does not realize the servers do not work. HyperFlow also has trouble auto-negotiating with Bay Networks' 28115 switches, but a work-around enables the product to transmit 4,000 requests per **second**. This is far superior to other load balancing products, such as Cisco Systems' Local Director.

PRICE: \$17999

COMPANY NAME: HolonTech Corp (639079)
SPECIAL FEATURE: Graphs
DESCRIPTORS: Communications Interfaces; Data Communications; Distributed Processing; Encryption; File Transfer; Internet Utilities; Load Balancing; Network Software; Network Utilities; System Performance
REVISION DATE: 20000228

21/5/12

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00101388 DOCUMENT TYPE: Review

PRODUCT NAMES: SessionWall-3 1.1 (660701)

TITLE: Hear All Evil, See All Evil
AUTHOR: Phillips, Ken
SOURCE: PC Week, v14 n16 p73(1) Apr 21, 1997
ISSN: 0740-1604

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

AbirNet's SessionWall-3 1.1 monitors all network session traffic for such inappropriate use as **sending** out e-mail containing unacceptable content or language; intruding into private accounts; downloading sexually descriptive images; or reading sports pages on the World Wide Web. Forbidden and illegal activities are detected, and the administrator is informed and the activity halted by SessionWall-3. SessionWall-3 is a sophisticated packet analyzer that tracks session traffic, probing all TCP/IP **transmissions** to, from, and inside the network. It helps in

analyzing network use and can also pinpoint threats originating in locations external to the network. SessionWall-3 is not a firewall replacement, and it cannot zero in on most complicated Internet invasions. SessionWall, which is rated good overall with excellent interoperability, also needs real-time updating features added to its content viewer, and it needs a fast, effective alerting system. Real-Secure from Internet Security Systems could be SessionWall-3's closest competitor, but RealSecure emphasizes analysis of service attack trends instead of network traffic patterns. Testers found that SessionWall-3's event configuration procedure was logically designed, but the alert system was more difficult to use. Several events were set up for alerting. However, SessionWall-3 cannot find such problems as **ping** floods or e-mail spamming, or other attacks on services.

PRICE: \$995

COMPANY NAME: Computer Associates International Inc (081957)
SPECIAL FEATURE: Charts Screen Layouts
DESCRIPTORS: Computer Security; Conferencing; E-Mail Utilities; Employee Supervision; IBM PC & Compatibles; Internet Security; Network Administration; Network Software; System Monitoring
REVISION DATE: 20020630

21/5/13

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00099623 DOCUMENT TYPE: Review

PRODUCT NAMES: Internet Security (841944)

TITLE: Web spoofing poses new security threat
AUTHOR: Woollacott, Matthew Radosevich, Lynda
SOURCE: InfoWorld, v19 n1 p33(2) Jan 6, 1997
ISSN: 0199-6649
HOMEPAGE: <http://www.infoworld.com>

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

World Wide Web spoofing, a new form of Internet hacking, may soon become the chief security risk that network staff have to deal with, surpassing such invasions as Syn floods, viruses, and **Ping** o' Death. This method, which so far has not been documented in a production system, spoofs a **server** and changes data retrieved by a browser **user**. Unlike Syn flood attacks, Web spoofing compromises the soundness of the Web site owner's data. Syn simply locks **users** out of an Internet connection by flooding the **server** with requests for a connection. **Users** can protect against Syn attacks by closely monitoring Web sites, installing current protective patches for routers, **servers**, and operating systems, and using monitoring/detection tools. Web spoofers have to attract **users** to a fake Web site first, either by hacking into an existing site and substituting URLs, getting a spoofed site listed on a search engine, or **sending** e-mail to **users** with an address that seems attractive. The spoof site then puts its own address in front of any URLs the **user** requests. To circumvent Web spoofing, **users** can click on a bookmark or choose open location from the file menu, because these are parts of the browser than cannot be affected by a Java applet. The only way to completely eliminate the problem is to change the basic way in which the Web and Java applets work.

COMPANY NAME: Vendor Independent (999999)
SPECIAL FEATURE: Charts
DESCRIPTORS: Computer Security; Internet; Internet Security; Network Administration; Network Software; System Monitoring
REVISION DATE: 20020630

21/5/14

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00083570 DOCUMENT TYPE: Review

PRODUCT NAMES: Microsoft Windows NT (347973)

TITLE: NT gets cluster schedule

AUTHOR: Johnston, Stuart J Bozman, Jean S

SOURCE: Computerworld, v29 n42 p4(1) Oct 16, 1995

ISSN: 0010-4841

HOME PAGE: <http://www.computerworld.com>

RECORD TYPE: Review

REVIEW TYPE: Product Analysis

GRADE: Product Analysis, No Rating

The next release of Microsoft Windows NT will include clustering technology acquired from Digital Equipment. Microsoft aims to allow users to do Windows NT clustering without using special proprietary hardware. Microsoft plans to release a technical white paper explaining its clustering plans. Some manufacturers, including General Motors' Saturn automobile plant, have **started** using Windows NT on manufacturing lines, and enthusiastically await **failover** support. Clustering will allow users to install Windows NT to provide support for tasks usually performed by high-end UNIX servers. **Failover** clustering allows one machine in a pair of clustered servers to assume the tasks of the other if the **second** machine goes down. Microsoft's goal is to interlink many machines, so that Windows NT can compete with UNIX systems that symmetrically multiprocess in quantities of up to 32 processors.

COMPANY NAME: Microsoft Corp (112127)

DESCRIPTORS: Fault Tolerance; Industrial Automation; Manufacturing;
Network Software; Operating Systems; Windows NT/2000

REVISION DATE: 20020819

21/5/15

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00078165 DOCUMENT TYPE: Review

PRODUCT NAMES: Internet Chameleon 4.5 (415928); Internet Office 4.0 (552143); SuperTCP Pro (529451); Quarterdeck Mosaic (552127); Internet Anywhere (500381)

TITLE: Browser Wars Fallout To Benefit All Web Users

AUTHOR: Trowbridge, Dave

SOURCE: Computer Technology Review, v15 n5 p1(3) May 1995

ISSN: 0287-9647

HOME PAGE: <http://www.westworldproductions.com>

RECORD TYPE: Review

REVIEW TYPE: Product Comparison

GRADE: Product Comparison, No Rating

Descriptions of browser products shown at two recent expositions are provided. NetManage's Chameleon 4.5, a **Transmission** Control Protocol/Internet Protocol (TCP/IP) suite with an included WebSurfer browser, is integrated with ECCO, a Personal Information Manager. Spry's Internet Office 4.0, a group of secure applications for corporate Internet use, uses Wall Data's **host** connectivity technology, and the included Mosaic browser supports Secure Hypertext Transfer Protocol (S-HTTP).

Frontier Technologies' SuperTCP Pro, a well-integrated suite of secure TCP/IP applications, includes the WinTapestry browser; **users** can coordinate/organize Internet sources with a file folder/hotlist. MKS' Internet Anywhere, for home and business use, provides integrated e-mail, a Web browser, FTP, telnet, **ping**, finger, and menu access to the Open Text full-text search tool on the World Wide Web.

COMPANY NAME: NetManage Inc (525375); Sprynet (530476); Frontier Technologies Corp (514519); Symantec Corp (386251); True North Software (627101)

SPECIAL FEATURE: Screen Layouts

DESCRIPTORS: Computer Security; Front Ends; Internet Security; **User Interfaces**

REVISION DATE: 20010330

21/5/16

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00077531 DOCUMENT TYPE: Review

PRODUCT NAMES: LANSleuth + (513113)

TITLE: LanSleuth+

AUTHOR: Leeds, Matthew

SOURCE: MicroTimes, p232(2) Mar 6, 1995

HOME PAGE: <http://www.microtimes.com>

RECORD TYPE: Review

REVIEW TYPE: Review

GRADE: A

Systems & Synchronous' LANSleuth+ helps the part-time LAN administrator investigate and solve network glitches, providing a particularly useful protocol analyzer. The Windows product supports EtherNet and token-ring networks for decoding of Systems Network Architecture (SNA), **Transmission** Control Protocol/Internet Protocol (TCP/IP), NCP, IPX/SPX, and AppleTalk protocols. Many network interface cards are supported, and the package uses either packet or ODI drivers. Some of the functions provided include filters, triggers, alarms, time stamping, a **ping** utility, and real-time statistics. Online help assists novices in learning the ropes, but some expertise with protocol analysis is required. The interface contains many windows, which give it a crowded look. LANSleuth+ is recommended for its capable functionality.

PRICE: \$690

COMPANY NAME: SSI Embedded Systems Programming (585378)

SPECIAL FEATURE: Screen Layouts

DESCRIPTORS: IBM PC & Compatibles; LANs; Network Administration; Network Management; Network Software; System Monitoring; Windows

REVISION DATE: 20030625

21/5/17

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00076706 DOCUMENT TYPE: Review

PRODUCT NAMES: PC -NFS Pro 1.1 (224332); SuperTCP Pro 1.1 (529451); Reflection TCP Suite 4.0 (379425); PathWay Access (268658); AIR NFS 3.0 (523356)

TITLE: The Big Ping

AUTHOR: Henderson, Tom Robbins, Mike

SOURCE: LAN Magazine, 10 n4 p136(11) Apr 1995
ISSN: 1069-5621

RECORD TYPE: Review
REVIEW TYPE: Product Comparison
GRADE: Product Comparison, No Rating

The ideal **Transmission** Control Protocol/Internet Protocol (TCP/IP) communications package would combine ftp, telnet, or Network File System (NFS) support from either **PC** -NFS Pro 1.1 or SuperTCP/Pro 1.1. It would be as fast as Reflection TCP Suite 4.0, and have the graphical icons of Pathway Access. AIR NFS 3.0's broad modem support and LAN WorkGroup's BOOTP **server** would also be provided. The helpful daemons from BW-Connect TCP/NFS 3.1 would be included, and they would be nicely blended on a CD-ROM as in SuperTCP Pro. Administration would be as easy as that of LAN WorkGroup. Until such a product is created, current **users** can choose SuperTCP Pro for its broad support, full function set, easy installation, and high configurability.

COMPANY NAME: Sun Microsystems Inc (385557); Frontier Technologies Corp (514519); WRQ Inc (368113); Attachmate Corp (417041); Sprynet (530476)
SPECIAL FEATURE: Buyers Guides
DESCRIPTORS: Internetworking; LANs; Network Software
REVISION DATE: 20010730

21/5/18
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00071544 DOCUMENT TYPE: Review

PRODUCT NAMES: ChameleonNFS 4.01 (375039)

TITLE: Chameleon TCP/IP and NFS for Windows
AUTHOR: Mikes, Steve
SOURCE: X Journal, v4 n2 p89(3) Nov/Dec 1994
ISSN: 1056-7003

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Chameleon NFS TCP/IP for Windows 4.01 provides Mosaic World Wide Web browser **users** with the tools they need to gain access to the Internet from a local area network (LAN). Chameleon offers many necessities, including the required **Transmission** Control Protocol/Internet Protocol (TCP/IP) stack (with support for multiple stacks); IP routing, SLIP, NEWT, telnet, 3270 emulation, mail processing, **ping**, BIND name services, finger, whois, NEWTNews, Simple Network Management Protocol (SNMP) support, and file transfer protocol (ftp). Chameleon NFS has many identical TCP **clients**, with additional and important Network File Sharing support; NFS allows **PC users** to gain access to remote networked file systems and to export files to other networked **users**. Installation is the standard Windows variety, and Chameleon is a resource-efficient Dynamic Link Library (DLL). The programs work without a hitch and they operate with every **PC X server** available.

COMPANY NAME: NetManage Inc (525375)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: Front Ends; IBM **PC** & Compatibles; Internet Utilities; LANs; Network Software; **User** Interfaces; Windows
REVISION DATE: 20010330

21/5/19

DIALOG(R)File 256:SoftBase Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00066773 DOCUMENT TYPE: Review

PRODUCT NAMES: Internet Chameleon (415928)

TITLE: Riding the Internet on a Chameleon
AUTHOR: Marks, Howard
SOURCE: Network World, v11 n19 p44(2) May 9, 1994
ISSN: 0887-7661
HOMEPAGE: <http://www.nwfusion.com>

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Internet Chameleon, a full-functioned **Transmission** Control Protocol/Internet Protocol (TCP/IP) package with dial-up support supporting a Serial Line Internet Protocol (SLIP) connection, is a good product. It includes scripts for connection to most major Internet access providers, with a DLL-based design that uses no memory hungry terminate-stay-resident (TSR) programs. Modem speeds up to 19.2Kbit/sec are supported. It is implemented as separate Microsoft Windows applications, with no master program. Applications included are FTP, FTP **server** , TFTP, Mail, **PING** , Telnet, Whois, Newt, Newt News, Gopher **client** , and Finger. Improvements needed include an easier way to connect via FTP, addition of central administration, and changes to sometimes inappropriate visual aids. The worst problem is the fact that it does not always respond to lost connections.

PRICE: \$195

COMPANY NAME: NetManage Inc (525375)
SPECIAL FEATURE: Graphs Tables Screen Layouts
DESCRIPTORS: Communications Protocols; IBM **PC** & Compatibles; Internet Access; Internet Utilities; Windows
REVISION DATE: 20010330

Set	Items	Description
S1	1933	INTERNET()GATEWAY
S2	11	S1 AND VICOMSOFT
S3	8	S2 NOT PY>2000
S4	6	S3 NOT PD>20000927
S5	6	RD (unique items)
File	2:INSPEC	1969-2003/Dec W1 (c) 2003 Institution of Electrical Engineers
File	6:NTIS	1964-2003/Dec W2 (c) 2003 NTIS, Intl Cpyrght All Rights Res
File	8:EI Compendex(R)	1970-2003/Nov W5 (c) 2003 Elsevier Eng. Info. Inc.
File	34:SciSearch(R)	Cited Ref Sci 1990-2003/Dec W1 (c) 2003 Inst for Sci Info
File	35:Dissertation Abs Online	1861-2003/Oct (c) 2003 ProQuest Info&Learning
File	65:Inside Conferences	1993-2003/Dec W1 (c) 2003 BLDSC all rts. reserv.
File	92:IHS Intl.Stds.& Specs.	1999/Nov (c) 1999 Information Handling Services
File	94:JICST-EPlus	1985-2003/Dec W2 (c)2003 Japan Science and Tech Corp(JST)
File	95:TEME-Technology & Management	1989-2003/Nov W5 (c) 2003 FIZ TECHNIK
File	99:Wilson Appl. Sci & Tech Abs	1983-2003/Oct (c) 2003 The HW Wilson Co.
File	103:Energy SciTec	1974-2003/Nov B2 (c) 2003 Contains copyrighted material
File	144:Pascal	1973-2003/Nov W5 (c) 2003 INIST/CNRS
File	202:Info. Sci. & Tech. Abs.	1966-2003/Nov 17 (c) 2003 EBSCO Publishing
File	233:Internet & Personal Comp. Abs.	1981-2003/Jul (c) 2003, EBSCO Pub.
File	239:Mathsci	1940-2003/Jan (c) 2003 American Mathematical Society
File	275:Gale Group Computer DB(TM)	1983-2003/Dec 12 (c) 2003 The Gale Group
File	434:SciSearch(R)	Cited Ref Sci 1974-1989/Dec (c) 1998 Inst for Sci Info
File	647:CMP Computer Fulltext	1988-2003/Dec W1 (c) 2003 CMP Media, LLC
File	674:Computer News Fulltext	1989-2003/Dec W1 (c) 2003 IDG Communications
File	696:DIALOG Telecom. Newsletters	1995-2003/Dec 15 (c) 2003 The Dialog Corp.

5/9/1 (Item 1 from file: 233)
DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003, EBSCO Pub. All rts. reserv.

00558464 00MW01-011

Internet-sharing software -- Internet Gateway , IPNetRouter improve high-speed Internet sharing

Beckman, Mel

Macworld , January 1, 2000 , v17 n1 p51, 1 Page(s)

ISSN: 0741-8647

Company Name: **Vicomsoft ; Sustainable Softworks**

URL: <http://www.vicomsoft.com> <http://www.sustworks.com>

Product Name: **Internet Gateway 6.5; IPNetRouter 1.4.2**

Languages: English

Document Type: Software Review

Grade (of Product Reviewed): B; C

Hardware/Software Compatibility: Macintosh

Geographic Location: United States

Presents a review of two Internet-sharing software programs. Provides a favorable review of **Internet Gateway 6.5** (\$249) from **Vicomsoft** (800) and a mixed review of **IPNetRouter 1.4.2** (\$89) from Sustainable Softworks. Likes **Internet Gateway 6.5's** excellent documentation, network-address translation and DHCP, content filtering, remote administration, and dial-in access. Dislikes its per-user pricing. Rates it four on a scale of one to five. Notes that **IPNetRouter 1.4.2** is inexpensive and likes its network-address translation and DHCP. Dislikes its lack of dial-in access, limited administration features, and lack of telephone technical support. Gives it a rating of three on a scale of one to five. Concludes that **Internet Gateway 6.5** works best in business environments that can afford to spend around \$50 per networked user, whereas anyone on a stricter budget will welcome **IPNetRouter 1.4.2's** economical price. Includes one screen display. (CT)

Descriptors: Internet Access; Filtering; Connectivity; Bandwidth; Input/Output

Identifiers: **Internet Gateway 6.5; IPNetRouter 1.4.2; Vicomsoft ; Sustainable Softworks**

5/9/2 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02399338 SUPPLIER NUMBER: 62099334 (THIS IS THE FULL TEXT)
Network Services -- Vicomsoft Internet Gateway Enterprise Suite

6.6.(Brief Article)(Product Announcement)

Network Computing, 42

May 15, 2000

DOCUMENT TYPE: Brief Article Product Announcement ISSN: 1046-4468

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 136 LINE COUNT: 00015

TEXT:

Improved. An unlimited number of your company's networked users can access the Internet using **Vicomsoft's Internet Gateway Enterprise Suite**. The connections can be of virtually any type-modem, cable modem, DSL, T1 and so on. And direct support for PPPoE (PPP over Ethernet) is included. **Internet Gateway** has a number of new or improved performance features, including Internet Teaming, which lets you increase bandwidth by combining connections (two modems, or a DSL connection and a modem, for example). Version 6.6 also features Web and DNS caching for improved access speeds. Administrators can control user access with the filter and timer features and can also monitor the system with the remote-administration option.

Available: Now. \$499.

Vicomsoft , (800) 818-4266, fax (650) 691-9838.

www.vicomsoft.com

COMPANY NAMES: **Vicomsoft** --Product introduction
GEOGRAPHIC CODES/NAMES: 1USA United States
DESCRIPTORS: Network management software; Networking software product
introduction
EVENT CODES/NAMES: 336 Product introduction
PRODUCT/INDUSTRY NAMES: 7372611 (Network Management Software)
SIC CODES: 7372 Prepackaged software
NAICS CODES: 51121 Software Publishers
TRADE NAMES: **Vicomsoft Internet Gateway** Enterprise Suite 6.6
(Network management software)--Evaluation
FILE SEGMENT: CD File 275

5/9/3 (Item 2 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02391686 SUPPLIER NUMBER: 61602902 (THIS IS THE FULL TEXT)
DHCP Server 6.5.(from Vicomsoft)
BECKMAN, MEL
Macworld, 17, 5, 50
May, 2000
ISSN: 0741-8647 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 653 LINE COUNT: 00055

TEXT:

SIMPLE IP ADDRESS ADMINISTRATION

NOW THAT ALMOST ALL MACINTOSH network services--including personal file sharing under OS 9--operate over TCP/IP, network administrators are discovering the travails of managing IP addresses in large networks. With TCP/IP, every user must have a unique IP address, subnet mask, gateway address, and DNS server address. You can administer about a dozen users manually, but beyond that number IP address management becomes a nightmare. Dynamic Host Configuration Protocol (DHCP) ends the bad dream by doling out IP address information to end users from a central server. Alas, while Macs can act as DHCP clients, no version of the OS has built-in DHCP server support.

Vicomsoft 's DHCP Server 6.5 fills that gap, competing with commercial DHCP servers that run on Windows or Unix or as part of a dedicated network device. **Vicomsoft** 's server boasts a low price and the ability to run on low-end Mac hardware (68040 processor, 8MB of RAM, and Mac OS 7.5.3 or higher). And unlike an embedded DHCP server, such as the one built into SonicWall's firewall, **Vicomsoft** 's server doesn't forget all of its DHCP assignments when rebooted--a significant advantage on a large network with dozens or even hundreds of users.

DHCP Server comes preconfigured to deliver 253 addresses in a standard private IP address range and subnet mask. You need only specify the IP address of your **Internet gateway**, a company domain name, and the addresses of as many as five DNS servers; DHCP Server then configures your clients--Mac, Windows, or Unix--with these values. A Gateway extension lets you run other TCP/IP services, such as DNS, e-mail, and Web servers, on the same machine. An optional \$29 remote-administration application enables you to configure and monitor DHCP Server from anywhere on your network.

Some machines, such as servers, require fixed IP assignments so users can locate them. DHCP Server has a workable, if ungraceful, provision for fixed addressing: you list these servers in a text file as IP-Ethernet address pairs. DHCP Server then uses the specified IP address instead of choosing one dynamically.

DHCP Server supports multiple Ethernet interfaces, letting you use a single server for more than one physical network. It also permits multiple IP address ranges on a single Ethernet interface--handy if you use IP addressing and a local router to separate user groups into different IP address ranges. DHCP Server can deliver as many as 1,024 IP addresses, so

it can support even large networks.

DHCP Server does its job well but lacks two advanced features needed to make it a truly enterprise-class product: dynamic DNS and automatic fail-over. Dynamic DNS is a standard for maintaining domain-name associations with user IP addresses even when those addresses change. Without dynamic DNS, users must contact each other in advance to learn their IP addresses when they want to exchange files via personal file sharing. Automatic fail-over lets you run a backup DHCP server that maintains a copy of the DHCP database, so failure of the primary server won't cripple your network.

Macworld's Buying Advice

If you're running TCP/IP for a growing network, IP address administration is a nasty chore you can't ignore. If you have a network with several hundred users, **Vicomsoft**'s DHCP Server 6.5 will simplify your life. Although DHCP Server lacks some advanced features, the advantage you gain by keeping this administrative function in the Macintosh fold makes it a good choice for basic DHCP.

RATING: ***1/2 PROS: Inexpensive; supports multiple address ranges and Ethernet cards; remote-administration option. CONS: Lacks dynamic DNS support; no automatic fail-over; awkward interface. COMPANY: **Vicomsoft** (800/818-4266, www.vicomsoft.com). LIST PRICE: \$95.

REAL RATINGS

OUTSTANDING: *****

VERY GOOD: ****

GOOD: ***

FLAWED: **

UNACCEPTABLE: *

COPYRIGHT 2000 Mac Publishing

COMPANY NAMES: **Vicomsoft** --Products

DESCRIPTORS: Network management software; Software single product review

PRODUCT/INDUSTRY NAMES: 7372611 (Network Management Software)

SIC CODES: 7372 Prepackaged software

NAICS CODES: 51121 Software Publishers

TRADE NAMES: **Vicomsoft** DHCP Server 6.5 (Network management software)--
Evaluation

FILE SEGMENT: CD File 275

5/9/4 (Item 3 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

02339447 SUPPLIER NUMBER: 56063088 (THIS IS THE FULL TEXT)

The Mixed-Platform Home Network. (Technology Tutorial) (Tutorial)

ABEL, AMEE

Home Office Computing, 17, 10, TNH2

Oct, 1999

DOCUMENT TYPE: Tutorial ISSN: 0899-7373 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 2754 LINE COUNT: 00216

ABSTRACT: About 15 million US households have more than one computer and many of them mix Windows and Apple Macintosh machines. The increase in the number of mixed-system homes has also brought a corresponding increase in the interest in networking these machines. So far there has been no magic bullet that enables cross-platform links for sharing an Internet connection, printers and files. There are a number of third-party software products for such purpose but they require technical savvy and a lot of work. Tips for building a full-fledged, cross-platform home network are presented.

TEXT:

Want to share connections, files, and printers between your Windows and Mac machines? Here's how to get your computers to cooperate

WE FELL FOR IT TOO. LIKE THE TIME the kids brought a puppy into our cat-centric home--it was so cute, we just had to keep it. Suddenly, you've

got a cute and colorful iMac living in your otherwise Windows PC household. You're not alone: Today an estimated 15 million households in the United States have two computers, according to New York-based Jupiter Communications, which expects the figure to grow by 30 percent annually. Although the study isn't broken out by computing platform, Apple's research shows that 13 percent of iMac buyers have previously owned a Windows PC.

Different scenarios may account for how that "other" computer arrived in your home. Maybe your employer's platform of choice isn't yours, so you find yourself toting your company notebook PC into your Mac-based home office every night. It could be a his-and-hers thing: You and your spouse each had your own system before marriage and neither is willing to convert. Or perhaps those sub-\$500 PC offerings are too much for even diehard Mac fans to resist.

Whatever the reason for the increasing number of mixed-system homes, the interest in networking them is understandably growing, too. Although it's been possible to share printers--and to a lesser extent, files--on crossplatform corporate LANs for years, vendors such as Farallon have begun turning their attention to the home networking market. Their initial focus, however, is on Internet connection sharing, with file and printer sharing taking a back seat.

That's not to say you can't set up a cross-platform network to share files or printers between Macs and PCs. You can--but at press time, there was still no magic-bullet, cross-platform networking kit that makes simple work of sharing an Internet connection, files, and printers. For now, you'll still have to rely on corporate-style, third-party software products to complete the picture. Even if you're technically savvy, prepare to spend hours reading manuals, troubleshooting installations, and calling tech support. But if you're game, we'll show you how to build a full-fledged, cross-platform home network, as well as offer you a peek at several next-generation products that might be worth waiting for (see the sidebar, "The Best is Yet to Come?").

In planning a PC-to-Mac network, you'll find the hardware and software components break out neatly. The hardware installation is similar to building any network: Each computer requires a network interface card (NIC), wires to connect the NICs together, and driver software to make the computer aware of the NIC. The software installation, in turn, involves activating the networking features of both operating systems (Windows and Mac OS) and installing third-party programs for Internet connection, file, and printer sharing.

The Hardware Half

Of the five home networking technologies--USB, radio frequency, Ethernet, AC power line, and home phone line--only Ethernet and phone line offer Macintosh support for cross-platform configurations. Network hardware manufacturers such as Farallon (www.farallon.com, 800-613-4954), Diamond Multimedia (www.diamondmm.com, 800-468-5846), ADS Technologies (www.usbhost.com, 800-888-5244), and LinkSys (www.linksys.com, 800-LINKSYS) offer valuable assistance for selecting parts. But before you buy anything, you need to understand how these networks fit together.

Ethernet The darling of the corporate office, Ethernet offers the most versatility for building a cross-platform network simply by virtue of its many product offerings. But you won't find off-the-shelf, cross-platform networking kits: Expect to purchase the hardware parts piecemeal.

Expandability and speed make Ethernet a good choice. Individual computers are connected in star-shaped groups radiating from a wiring hub, a small box with RJ-45 connectors that ensures your files and requests are sent to the right device. Adding computers and peripherals to an Ethernet network is a simple matter of plugging in a second hub when the first is filled. (You can connect two computers without a hub, however.)

Ethernet comes in two varieties, 10Mbps Ethernet and 100Mbps Fast Ethernet. Your best bet is to buy a kit with a 10/100 hub, so you can use a mix of 10Mbps and 100Mbps NICs. Today's Macs (iMacs and G3s) have 10/100 equipment built-in; for your PCs, consider kits such as LinkSys' Fast Ethernet 10/100 Network in a Box (\$139), or similar offerings from 3Com or NetGear. Note that on a mixed 10/100 network, the faster equipment slows down to accommodate its slower cousins.

There are two downsides to Ethernet: stringing wires and cracking

open the case. For wiring, you'll want to buy Category 5 cables that can handle Fast Ethernet speeds. To install the PCI Ethernet NIC card, you'll need to open your computer, make sure you avoid static electricity, and use a screwdriver to attach the card to the motherboard. (For details, see the Home Study section in The Networked Home, September 1999.) On a laptop computer, you simply plug a network adapter into a PC Card slot.

Apple systems have always included networking connectivity, but the hardware has changed over the years. Today's iMacs and PowerMac G3s use standard RJ-45 connectors (which look like large RJ-11 telephone plugs). In contrast, older Macs have D-shaped AAUI-15 connectors, so you'll need to buy an AAUI to RJ-45 transceiver (\$29; Farallon) to add it to your network. Ancient Macs use LocalTalk hardware (an Ethernet precursor), which means you'll need to investigate Farallon's line of LocalTalk-to-Ethernet adapters.

Although a handful of PC vendors offer systems with Ethernet NICs included, most Windows PCs lack networking hardware. But if you have a Windows 98 system with a USB port, consider buying a USB-to-Ethernet adapter from ADS Technologies (\$119; www.usbhost.com) or LinkSys (\$38). Plugging the device into your USB port gives you an RJ-45 Ethernet adapter without having to install a NIC.

USB support on Windows 95 systems is trickier. Although Windows 95's latter versions included a USB support patch, variations in motherboards and BIOS implementations make USB performance uneven. Our recommendation for pre-1998 systems is to stick with a PCI NIC.

Home Phone Line Although much slower than Ethernet, phone-line networking kits provide adequate speed for connecting two or three systems without additional wiring. Home phone-line equipment currently offers less variety than Ethernet. Only PCI adapter cards exist for Macs, although USB and even an Ethernet-to-home phone-line adapter are in the works.

The first cross-platform home phone-line product, Farallon's Home-Line PCI Starter Kit (\$139) lets you network a PC with most Power Macintosh systems, including the G3s, but not iMacs. (For a hands-on review, see the New & Networky section in this issue of The Networked Home.)

Likely to be a better solution are cross-platform USB phone-line networking kits, expected to reach store shelves soon. Although you'll find USB ports on both Windows and Apple machines, you'll also need a special Apple USB driver. Read the package carefully on USB networking kits to make sure you buy one that states explicitly that it's for the Mac OS and Windows. Because all home phone-line kits are designed to work together, you should be able to mix and match products.

Think USB is a smart way to bring your iMac onto the network? Apple doesn't see it that way. Technical issues are delaying the development of Mac USB drivers, and iMac product marketing manager Craig Michaels sums up Apple's view: "The iMac kick-started USB. We see it as a vital part of the new age of Mac input/output--but not as a networking port."

The Software Side

Once you've set up your hardware of choice, the next step is to install a driver on each system. The hardware vendor supplies this software on a disk or CD-ROM, along with instructions. You'll need to turn on the operating systems' networking capabilities, which involves installing the right protocols, enabling file and printer sharing, and granting the appropriate access.

For Windows, go to the Control Panel's Network applet, check to see that IPX/SPX, NetBEUI, and TCP/IP are installed, then enable file and printer sharing and close the applet. Next, right-click each drive, printer, and folder you wish to share, and select Sharing.

For Mac OS 8, turn on File Sharing (called Sharing Setup in earlier versions), AppleTalk, and TCP/IP through their control panels under the Apple Menu. Next, designate the files, folders, printers, and drives you wish to share through the Finder. Click on the item, choose Sharing from the File menu, then check the "share this and its contents" box.

On a homogeneous network, the above steps are sufficient to enable PCs to share with PCs or Macs with Macs. But on a cross-platform network, you may need third-party software, described below, to complete the task. To use these products, your PCs and Macs must be connected on a network, though it doesn't matter which type.

Internet Access Sharing To make one of your computers act as a gateway between your ISP and your network, you'll need to install special software. Designate as the gateway system whichever one has the modem (or cable or ADSL) connection.

If a Mac is your gateway, Vicomsoft's SurfDoubler (\$54; 800-818-4266, www.vicomsoft.com) gives two computers on your network access to the Internet. Either machine can request Web sites and e-mail. For more than two systems, SurfDoubler lets a third or fourth system share the connection, but not simultaneously. SurfDoubler Plus (\$74) adds filtering and detailed parental controls in conjunction with the CyberNot Web site.

If a Windows 95/98 PC is your gateway, WinGate Home 3.0 (\$40; 517-732-8856, www.wingate.com) lets multiple Mac and PC systems access the Internet. Finally, if your PC is running Windows 98 Second Edition, you have Internet sharing built-in. Microsoft's Internet Connection Sharing lets Macs and PCs share a connection without third-party tools. (\$109; upgrade from Win 98 \$20; 800-426-9400, www.microsoft.com/windows98).

File and Printer Sharing If you simply want to view and copy Mac files on your PC, then Mac OS 8's built-in Personal Net Finder and Personal Web Sharing features may do the trick. Enabled from the TCP/IP control panel, Personal Web Sharing turns your Mac into a mini Web server, and Personal Net Finder lets other computers view a directory of the Mac's shared files via a browser. To use Personal Web Sharing, the files must be converted to HTML format.

For full two-way file transfer (and the ability to view PC files on a Mac), you'll need third-party software. Three products are currently available; each offers somewhat different capabilities and none is specifically designed for home office networks.

PC MacLAN for Windows 95/98 (\$199; Miramar Systems, 800-862-2526, www.miramarsys.com) installs on your PC and uses the AppleTalk protocol to exchange files and share AppleTalk printers. There's no need to learn a new interface: Windows 95/98 PCs access Mac resources directly from Network Neighborhood, and Macs access PC resources from Chooser. On a two-computer, PC-to-Mac network, first set up the Mac's AppleTalk control panel for sharing, then begin the PC MacLAN installation on your Windows machine.

Although novice users can easily become overwhelmed by the program's potential, PC MacLAN's excellent technical support (805-965-5161, available weekdays from 8 a.m. to 5 p.m. PT) will hold your hand. Plan to call them.

The Mac counterpart is called Dave 2.1 (\$149; Thursby Software Systems Inc., 817-478-5070, www.thursby.com). It's simpler to use than PC MacLAN, but you can't share an Internet connection and run Dave simultaneously. Still, the program provides two-way file transfer and makes it easy for Macs to use PC printers.

Netopia's Timbuktu Pro 5.0 (\$100, single-user license for Mac; \$140, two-pack for Windows; 510-814-5100, www.netopia.com) uses the operating systems' existing TCP/IP protocol to handle remote control, file sharing, message sending, chat, and even voiceover-IP conversations. You install the software on each networked system. Although it's pricey for a home network (because it's really geared to big corporate networks), the program offers the unique ability to operate a Mac from your PC or a PC from your Mac. Now that's cooperation.

RELATED ARTICLE: The Best is Yet To Come?

10MBPS HOME PHONE LINE The recent release of the Home PNA's 2.0 specification signals the start of a race--led by 3Com/Microsoft, Intel, and Diamond Multimedia--to get 10Mbps home phone-line kits to market this fall. But because products will be backward-compatible with existing 1Mbps offerings, there's little reason to hold off building your cross-platform network until their arrival. Note also that these kits are expected to cost twice as much as existing ones, at a time when few, if any, applications can take advantage of the increased speed. Your best bet is to upgrade to 10Mbps once these products have been around awhile.

USB PHONE LINE Apple may not consider USB a networking port, but PC vendors and Microsoft sure do. Although difficulties with implementing a Macintosh USB network adapter driver have caused companies such as LinkSys to shy away, the first USB phone-line products should be arriving on store shelves by the time you read this.

HOMEFREE PHONE LINE USB CROSS-PLATFORM STARTER KIT (pricing not announced by press time; Diamond Multimedia) is expected to include both

SurfDoubler and Wingate 3.0 software, so you can choose your **Internet gateway** system; improved installation software; and PC MacLAN Lite for printer and file sharing on a two-computer network. Plans for a faster (10Mbps) home phone-line kit are also in the works.

HOMELINE USB CROSS-PLATFORM STARTER KIT (pricing not yet announced; Farallon) expands Farallon's existing HomeLine cross-platform line. Expected to ship this fall, Farallon plans to add an as-yet undisclosed PC-based Internet sharing product to its current software bundle (SurfDoubler, PC MacLAN Demo, and Timbuktu demo), as well as individual HomeLine USB adapters to add single PCs or Macs to an existing home phone-line network.

HOMELINE ETHERNET TO PHONE LINE ADAPTER (pricing not yet announced; Farallon) will let your iMac join an existing home phone-line network. It's expected to ship this fall.

WIRELESS PC CARDS As we went to press, Apple Computing and Farallon each announced wireless adapter cards for both Mac and Windows notebooks. Although these cards connect to other computers or existing networks using radio frequency (RF) technology, it's not HomeRF--which Proxim, Diamond, and WebGear endorse--but the more robust 802.11 DSSS standard long used for corporate wireless LANs. The technology provides higher data rates and the ability to connect to existing Ethernet networks.

SKYLINE WIRELESS PC CARD (\$299; Farallon) comes with drivers for both Mac and Windows computers, allowing the same card to work in either Windows or Apple notebooks. The card delivers 2Mbps throughput and connects to existing wired networks via special access point software.

AIRPORT BASE STATION AND AIRPORT CARD (\$299 and \$99, respectively; Apple Computing, 800-795-1000, www.apple.com) deliver 11Mbps throughput, which is five times faster than earlier 802.11 equipment, plus they're backward-compatible. The card is specifically designed for Apple's new iBook, though the company promises that similar cards for its other notebooks are in the works. The base station includes a 56Kbps modem and an R J-45 10/100 Ethernet port for connecting AirPort equipment to dial-up, cable, or ADSL Internet connections.

AMEE ABEL writes about home networking, e-commerce, and other technologies from her New Hampshire home office.

COPYRIGHT 1999 CURTCO Freedom Communications

DESCRIPTORS: Network architecture; Technology installation instructions;
Home computer market

PRODUCT/INDUSTRY NAMES: 3573120 (Microcomputers)

NAICS CODES: 334111 Electronic Computer Manufacturing

FILE SEGMENT: CD File 275

5/9/5 (Item 4 from file: 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

02255821 SUPPLIER NUMBER: 53456019 (THIS IS THE FULL TEXT)

Internet connection sharing made simple. (Vicom product family) (Software Review) (Evaluation)

Whaley, Charles

Computing Canada, 24, 48, 27(1)

Dec 21, 1998

DOCUMENT TYPE: Evaluation ISSN: 0319-0161 LANGUAGE: English

RECORD TYPE: Fulltext

WORD COUNT: 816 LINE COUNT: 00069

TEXT:

If you've got just one Internet connection, try **Vicomsoft** 's family of Net- sharing software

Need to share an Internet connection? **Vicomsoft** , a division of Vicom Technology Ltd. in Mountain View, Calif., has something for you: A family of products that lets you share a single Internet connection among multiple PCs or Macs. But wait. It gets better. Because the products do not require additional hardware, they are an economical Internet solution for small-to-medium businesses, or for residential users, where several computers are

already competing for the same phone line.

There are three products in the family. They differ somewhat in their sophistication and the number of users they can support, but their core functionality is the same. SurfDoubler allows two users (either Mac or Windows, although the server must be a Mac) to share simultaneous use of a modem, cable modem or ISDN line. SoftRouter Plus provides similar sharing, but it's better suited to LANs using Ethernet or LocalTalk connectivity. The pipeline to the ISP can be by dial-up or dedicated modem, cable modem, ISDN, xDSL, even T1. Naturally, since this is a bandwidth sharing solution, you'd want to choose an ISP connection that will accommodate the number of PCs, Macs and Unix boxes that you might have on your LAN.

The **Vicomsoft Internet Gateway** is the top-of-the-line solution, offering essentially the same features as SoftRouter Plus, but adding Internet content filtering via CyberNOT software.

With this additional functionality, a system administrator can selectively screen access to Web sites containing content from a dozen categories.

Although both SoftRouter Plus and **Internet Gateway** now have Windows 95/98/NT 4 Server versions, I tested the latest version of all three products on my three-Macintosh LAN using both Ethernet and LocalTalk networking, and 56Kbps modem dial-in access to my ISP.

The only thing intimidating about installation is the documentation. The Quickstart guide for SoftRouter Plus, for instance, is 37 pages long. Rightly or wrongly, the documentation people chose to err on the side of being over inclusive in both the Quickstart and the much longer 130-page User Guide.

What had me breathing a major sigh of relief, however, is that (for a relatively uncomplicated LAN like mine), I had the software installed, configured and running in less time than it took me to read the first 10 pages of the Quickstart guide. As soon as I discovered that there was an "Auto Setup Guru," I quit reading and fired it up. As long as you've gone through the exercise of connecting to the Internet before, and know a bit about the vocabulary of LANs, you won't have much trouble with the setup screens.

What was equally impressive is that there is no software installation required on your client machines. Both Macs and Windows PCs have OS-based Control Panels where you can quickly set the TCP/IP parameters.

With three browsers on three Macs concurrently downloading pages and files, while I uploaded and downloaded many e-mail messages with and without attachments on a single 56 Kbps modem connection, performance was obviously degraded. But not nearly as much as I anticipated.

My experience suggests that a very small business with, say, a half-dozen users with regular e-mail and occasional Web browsing requirements, could get by with one dial-up or dedicated 56 Kbps modem connection for day-to-day needs.

From a price-performance standpoint, SurfDoubler is probably suited only to the home market, where at least one of the two machines is a Mac. Also, unless censorship is really a major concern in a work or educational environment, the CyberNOT functionality of **Internet Gateway** vs. SoftRouter Plus is not worth the 30 per cent to 70 per cent price hit.

For the current versions of these two products all other features are the same - making SoftRouter Plus the best compromise.

You can check the system requirements for each product at www.vicomsoft.com.

vicomsoft .com.

Charles Whaley is president of Information Technology Enterprises, an IT consulting firm based in Toronto. You can reach him at cwhaley@ITEnterprises.com or visit his Web page at www.ITEnterprises.com.

REPORT CARD

Vicomsoft Internet Gateway, SoftRouter Plus, SurfDoubler HHHH

Price: Please see www.vicomsoft.com for pricing information

Hits: Multiple, concurrent use of any type of Internet access account

Misses: All users of the common Internet access account are susceptible to server crashes and disconnects; ISPs offering "unlimited" accounts may see demands on their services increase significantly

Free Trial?: Yes, download from www.vicomsoft.com

The Verdict: All three products performed extremely well. Performance degradation was barely noticeable.

Contact: **Vicomsoft** Inc. Phone: 1-800-818-4266; Internet: www.vicomsoft.com or info@vicomsoft.com. Newsgroups: comp.sys.mac.comm, de.comp.sys.mac

COPYRIGHT 1998 Plesman Publications Ltd. (Canada)

COMPANY NAMES: **Vicomsoft** Inc.--Products
GEOGRAPHIC CODES/NAMES: 1USA United States
DESCRIPTORS: Software multiproduct review; Internet access software
EVENT CODES/NAMES: 350 Product standards, safety, & recalls
PRODUCT/INDUSTRY NAMES: 7372620 (Network Software)
SIC CODES: 7372 Prepackaged software
TRADE NAMES: SurfDoubler (Internet access software)--Evaluation;
SoftRouter Plus (Internet access software)--Evaluation; Vicom Technology
Internet Gateway for the Small Office (Internet access software)--
Evaluation
FILE SEGMENT: CD File 275

5/9/6 (Item 1 from file: 647)

DIALOG(R) File 647: CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rights reserved.

01215864 CMP ACCESSION NUMBER: NWC20000515S0011

Network Services - Vicomsoft Internet Gateway **Enterprise Suite 6.6**

NETWORK COMPUTING, 2000, n 1109, PG42

PUBLICATION DATE: 000515

JOURNAL CODE: NWC LANGUAGE: English

RECORD TYPE: Fulltext

SECTION HEADING: New and Improved

WORD COUNT: 130

TEXT:

Improved. An unlimited number of your company's networked users can access the Internet using **Vicomsoft**'s **Internet Gateway Enterprise Suite**. The connections can be of virtually any type-modem, cable modem, DSL, T1 and so on. And direct support for PPoE (PPP over Ethernet) is included. **Internet Gateway** has a number of new or improved performance features, including Internet Teaming, which lets you increase bandwidth by combining connections (two modems, or a DSL connection and a modem, for example). Version 6.6 also features Web and DNS caching for improved access speeds. Administrators can control user access with the filter and timer features and can also monitor the system with the remote-administration option.

Available: Now. \$499.

Vicomsoft, (800) 818-4266, fax (650) 691-9838.

www.vicomsoft.com

<http://www.nwc.com/>

Copyright 2000 CMP Media Inc.

COMPANY NAMES (DIALOG GENERATED): **Vicomsoft**

9/9/3 (Item 3 from file 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

02178496 SUPPLIER NUMBER: 20579805 (THIS IS THE FULL TEXT)

IP voice/fax gateways; a buyer's guide. (Buyers Guide)

Grigonis, Richard Zippy

Teleconnect, v16, n5, pS22(11)

May, 1998

DOCUMENT TYPE: Buyers Guide ISSN: 0740-9354 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 9283 LINE COUNT: 00734

ABSTRACT: A buyer's guide is presented of gateways for IP voice and fax. Several gateway options are available; standalone IP telephones, standalone network devices, multi-purpose NIC cards and PC server-based gateways built using specialized DSP cards or those built according to an industry standard.

TEXT:

An IP Telephony Gateway is a company's bridge to the promised land of cheap phone calls over the Internet or other IP network. You can build one yourself (you ARE a former rocket scientist, aren't you?), or buy a complete turnkey system (installed and tweaked to perfection by other eager-to-please Werner von Brauns).

The seemingly simple act of packetizing voice and fax, sending it over a TCP/IP network, and reassembling / depacketizing it at the other end has led to all sorts of different systems:

- * PC server-based gateways built using industry standard (i.e. Dialogic, NMS) voice cards. Voice cards aren't designed to compress and decompress audio, so this must be done on the host PC's CPU. These cost from \$1,000 to \$2,000 per port.

- * PC server-based gateways built using specialized DSP cards designed for IP telephony. Dialogic has the DM3 IP link (running software from VocalTec); Micom has analog, T-1 and E-1 cards for IP telephony; and NMS has the Fusion card used by many developers, including Inter-Tel. Expect to pay about \$500 to \$4,000 per port.

- * Standalone network devices resembling Ethernet hubs that connect directly to 10BaseT networks. This works if you don't want a dedicated server for POTS to IP conversion (though some companies are working on standalone devices that can do POTS to H.323 conversion). No PBXs are needed with such a system, since each hub is essentially a small PBX with voice mail and auto attendant which connects via RJ14 wiring to outside phone lines and phone extensions, and via RJ45 connectors to your company's Ethernet LAN (the hubs communicate with each other to create a distributed IP PBX). They cost about \$500 to \$1,000 per port.

- * Multi-purpose NIC cards with telephony capability (small scale stuff like the Internet PhoneJACK from Quicknet Technologies, or big-scale stuff like the ATM cards from Sphere Communications. Expect to pay about \$200 to \$500 per port.

- * Standalone IP telephones. About \$500 per port. An all-in-one, single line solution, but with limited flexibility.

Company-sized gateways scale up to about 96 ports per chassis at present, so even a large enterprise can be served.

Then there's the matter of the software running your system, which may give it some idiosyncrasies. Some systems use interactive voice response (IVR) prompts to ask local callers for a long-distance phone number, similar to the way many calling card systems operate. Others such as Lucent's ITS-E, work with your phone system to give you "one stage dialing" which means you can just dial "9" and then a number for IP or PSTN calling.

As for voice compression / decompression (codecs), while there are many proprietary algorithms, it looks like the ITU standard G-729 is going to be the "winner" in this department.

And don't forget H.323 capability, the IP interoperability standard that allows you to communicate with any other H.323 compliant system. PC users with H.323 based software products can connect into your gateway

network. And calls can be connected to gateways from other vendors supporting H.323, so your system can support real-time integration of voice, video and data for collaborative workgroup applications such as Microsoft NetMeeting.

If you're a private company, you can save big bucks if you make about 3,000 minutes of long distance calls between at least two locations each month, one or more of your locations is outside of the US, and you have access to an IP or a Frame Relay network.

For all of the angst over selecting, installing and tweaking such a system, IP telephony is definitely here to stay. It's simply more flexible and efficient than conventional circuit switched, frame, or ATM networks.

ACT NETWORKS

ACT Networks (Camarillo, CA -- 805-388-2474) is introducing a series of H.323-complaint multiprotocol, multimedia gateways for IP Telephony frame relay and the PSTN called ServiceXchange which will keep IP telephony costs below \$350 Per voice channel. The tiny (two feet high) entry-level model is the SX-10, which will support from 24 to 30 channels (one T-1 or E-1) to 96 to 120 (four T-1/E-1) simultaneous calls for about \$33,000.

It has four V-35/V.11 serial ports, one 10/100 auto-sensing Ethernet port and four RJ48 line interfaces.

It supports PC-to-PC, phone-to-PC, phone-to-phone and G3 fax connections over the Internet or corporate Intranets via IP or Frame Relay. Their ACTview 2000 SNMP network management system is based on a convenient point-and-click GUI interface, and the unit is available with ACT's Intracell Service Management (ISM) system for least cost routing, call accounting and billing functions.

The SX-10's bigger brothers will include the SX-12, a "carrier grade" model that supports up to 96 T-1/E-1 channels or 2,304 to 2,880 simultaneous calls. The SX-120 will be a NEBS-compliant, telco grade machine.

ACT will also deploy the mammoth SX-600, a genuine CO device that can handle 480 T-1 / E-1 or 11,500 to 14,400 calls.

BROOKTROUT

Brooktrout (Needham, MA -- 617-449-4100) Brooktrout has licensed key voice compression and H.323 protocol stack software from MiBridge based on elemedia's speech codecs and H.323 protocol stack technology, and has incorporated it into their own line of IP telephony products.

Brooktrout's BTGateway voice-and-fax-over-IP Kit is just that -- a kit for developers -- though it doesn't take much assembly work to put the hardware together (after that, of course, you still have to develop your killer software app). The Kit consists of Brooktrout's TR2000 DSP processing board (12 DSPs running at 30 MIPS), 24 channels of SpeechPac voice compression software based on the G.723.1 vocoder, FaxRelay software, BTStack323 H.323 stack software and a Netaccess PRI-ISA24 single T-1 board. The BTGateway Kit includes example and demonstration programs. Cost for 24 ports: \$19,995.

Brooktrout's IP Telephony components can be purchased separately and include the TR2000-24/G.723, a DSP resource board for IP-Voice applications including 13 C32 DSPs, on board DSP kernel and 24 channel SpeechPac software using the G.723.1 vocoder.

For a digital connection to the outside world, you'll want the TR2000-T1 -- a T-1 daughterboard/line interface for the TR2000 that has call control and voice processing software.

Brooktrout's NT/FaxRouter SDK (costs \$4,995) lets you build network fax routing and management software. It includes Brooktrout's network fax transfer protocol (RSAP), a fax mailbox system, telephone number to IP address service, SNMP MIB and an interface to the Brooktrout CNMS configuration network management software. The NT/FaxRouter SDK and CNMS lets developers create complete store and forward fax packages over IP systems using Brooktrout's IP/FaxRouter and IP Fax servers based on Brooktrout's renowned TR114 Series fax and voice boards.

CISCO SYSTEMS

The Voice-over-IP module for Cisco Systems' (San Jose, CA -- 408-526-4000) 3600 series routers lets you send calls over your intranet instead of the PSTN. The 3600 impressed us with the clear full-duplex voice quality calls we could route over it, even at a mere 8 Kbps bandwidth.

Interestingly, Cisco's routers allow the number you call to determine

the quality of the call, so a call to a VIP customer can be bumped up to a crystal-clear 64 Kbps PCM. Other Quality of Service enhancers in Cisco's IOS router operating software includes the Resource Reservation Protocol (RSVP) and Weighted Fair Queuing (WFQ) that gives voice priority queuing.

The 3600 comes in four to 12 trunk analog ports (FXS, E&M interfaces) to connect to your PBX. One router slot is used for Ethernet or ISDN / T-1 connectivity. It's about \$620 per port of voice, not including the cost of the router.

Cisco has recently announced the CISCO 2600 series, a new family of inexpensive, modular access routers that extends the packet telephony gateway characteristics of the larger CISCO 3600 series to smaller, remote branch offices and complements the Cisco 2500 series, Cisco's most cost-effective solution for mission-specific, branch office data applications.

The CISCO 2600 series shares modular interfaces with both Cisco's 1600 and 3600 series. The 2600 integrates the functions of CSU/DSUs, ISDN Network Termination 1 (NT1) devices and other equipment found in branch office wiring closets all in one compact unit.

Cisco 2600 series owners can use voice / fax modules, first introduced for the Cisco 3600 series, to take advantage of new apps such as Internet telephony, virtual private networks (VPNs), Web-based call centers, desktop video, and even outsourced dial access (when used with the recently announced Cisco AS5800 carrier-class access concentrator).

The Cisco 2600's components are field-upgradable, and support a new Advanced Integration Module (AIM) slot that further protects your investment by offering an upgrade path to hardware-assisted data compression, data encryption and other advanced services.

Moreover, to help you monitor and manage your end-to-end voice-enabled network, Cisco has come up with the Cisco Voice Manager, a Java-based app that simplifies the process of deploying and managing end-to-end voice-enabled networks. It simplifies configuring voice and fax interfaces and administering the voice dial plan, provides Call Detail Records, Call Volume Reports and Active Call Reports, and measures quality of service (QoS) parameters such as delay, packet loss and type of service.

You can also manage the Cisco 2600 remotely using network management applications such as CiscoWorks and CiscoView. The Cisco Voice Manager also supports the voice-enabled Cisco 3600 series.

CLARENT

The Clarent Gateway 2.0 (Naperville, IL -- 630-637-0448) uses Natural Microsystems cards to do DTMF and echo cancelling, Brooktrout cards for fax, and uses a dual Pentium Pro single board computer plugged into a fault resilient 19" wide rackmount chassis handle other processing required to send and receive phone calls and fax over networks TCP/IP.

The Model T1-RD (24-line T-1), E1-RD (30-line E-1), A16 (16 line analog), and A24 (24-line analog) systems use dual 200 MHz Pentium Pros and 64 MB RAM, while the A4 (four line analog) and A8 (eight line analog) gateways can get by with a single 200 MHz Pentium Pro. You'll need a 10 or 100BaseT LAN connection, Cat-5 Ethernet cable, and an SVGA Monitor.

System Software includes Windows NT Server 4.0, and the Clarent Gateway software. Utilities include MKS Toolkit3, Ataman TCP Remote Login Services (telnet), and pcAnywhere. There's also SNMP support.

Other software available includes the Clarent Account Manager (needs MS SQLServer) that can be used to build an extended network of Clarent Gateways throughout the world. Besides call routing, Account Manager validates user IDs, creates full billing records and collects packet transmission data for network analysis. It can print detailed user bills, product distributed departmental cost reports, or manage a commercial debit card business. Multiple Account Managers running on a network give you seamless fail-over protection.

For smaller deals, you can use the Clarent Route Manager, which allows up to six Clarent Gateways to route calls over an enterprise intranet. Only one Route Manager is needed, and it may be co-located with any of the servers.

Clarent gateways cost around \$1,500 per port.

COMDIAL

CT Voice from Comdial (Charlottesville, VA -- 804-978-2200) is a turnkey IP telephony gateway designed for businesses with multiple

locations. Developed for Comdial's computer telephony platforms (such as the FX series) in partnership with Array Telecom of Toronto, CT Voice provides high-quality, real-time voice and fax over any IP network.

If you have a Comdial FX PBX, a dealer can activate the CT voice VoIP software, so long as you have the correct Dialogic line / DSP cards installed.

CT Voice is highly scaleable -- from as few as two lines to as many as 24 T-1 lines. The gateway's design includes compression via an industry standard codec, dynamic jitter buffer management to minimize latency, and lost packet regeneration to reduce "chop."

CT Voice's slick call routing technology automatically directs long distance voice and data traffic over the IP network, the PSTN, or both based on user-defined criteria for lowest cost. For example, a business with gateways in New York and San Francisco can program CT Voice automatically to route calls originated in New York to numbers in the San Francisco local dialing area over the IP network. The San Francisco gateway then completes the call as a local call on the PSTN.

A major component is the "CT Voice: Manager" which does all the configuration, administration and operation of the gateway network. Complex tasks such as configuring a DNS server, Web server or FTP server can be executed quickly from a single program and on a single terminal anywhere on the network.

The CT Voice: Manager also provides full access to offline data, such as a database of call records, from any location on the network. User records can be reviewed and modified, detailed call records and event logs displayed and generated.

eFUSION

eFusion (Beaverton, OR -- 503-207-6300) has a couple of interesting IP telephony products:

The eStream Enhanced Internet Services application lets telcos and ISPs deliver apps to subscribers that are similar to conventional phone services -- like Internet Call Waiting and Internet Direct Dial. It's essentially a new class of Enhanced Services platform supporting a range of H.323-based IP telephony apps.

An eFusion application gateway consists of server unit having a direct connection to the PSTN using any one of various digital trunk interfaces: T-1, E-1, and Primary Rate ISDN. Each server can support up to 96 (four T-1) or 120 (four E-1) lines. By connecting multiple server units, an eFusion system can support thousands of lines.

There are two or four 200 MHz Intel Pentium Pro processors in each fault resilient server along with a 64-bit system bus, ECC system memory, a hot-swappable SCSI-3 disk subsystem, RAID level 1 support (with RAID 3 or 5 optional), a floppy drive, CD-ROM drive, and redundant cooling fans.

Digital voice encoding/decoding between the PSTN and IP networks is performed by DSPs relieving the server CPUs of this computationally-intensive task. DSP resource cards are linked to line cards using a standards-based PCM internal bus. Together, these elements provide a tightly-integrated, high-performance hardware environment for bridging Internet and PSTN connections.

When an IP telephony app involves a PC as an endpoint, eFusion systems need an H.323 Internet phone client (which implies a Pentium processor-class multimedia PC) and the eFusion Internet Call Assistant.

eFusion's IP telephony gateways support any H.323-compliant Internet phone client using G.723.1, G.729a, and SX8300 codecs such as Microsoft NetMeeting, Netscape Conference, and the Intel Internet Video Phone.

The Internet Call Assistant is a separate eFusion client application that runs on the consumer's PC and works with the Internet phone client to perform many critical coordination tasks such as registering the subscriber with the application gateway and executing Push-to-Talk buttons.

For call centers, eFusion offers the eBridge interactive Web Response system, which allows consumers to be connected directly to live agents -- without the need for a callback -- where they can simultaneously talk and share screen visuals over a single phone line.

FRANKLIN TELECOM

Franklin Telecom (Westlake Village, CA -- 805-373-8688) offers the Tempest Data/Voice-over-IP Gateway (DVG), with 24 ports per chassis. It can sit on a trunk or analog extension, or you can call into it from the public

network. One DSP is allocated per voice channel for the voice codec (Tempest can achieve an 8 to 1 voice compression ratio with G-729). It runs on everybody's favorite free UNIX platform Linux. You can use Franklin's own T-1 cards or analog line cards that provide FXO/FXS ports. There's also a connector for getting onto your Ethernet LAN.

The Tempest Data/Voice Gateway Consists of a rackmount PC chassis; Franklin's ICT-1 (MVIP) card, terminating a T-1 (DSX or CSU) digital circuit with up to 24 voice channels or the ICT-X 32x32 cross point switch for switching T-1 DSO input to output; and Franklin's ICDSP-8 card(s), which handle up to 8 channels of voice from the ICT-1. Three cards are needed in a full 24-channel configuration.

To use analog ports instead, you need up to three Franklin ICV-8 cards with FXS or FXO interfaces, instead of the T-1.

A Tempest system costs between \$850 and \$1,000 per port.

HYPERCOM

Hypercom's (Phoenix, AZ -- 310-455-0708) Integrated Enterprise Network (IEN) family of multiservice switch/routers, particularly the (EN 5000, can do Voice-over-IP encoding down to 6.2 Kbps ACELP. It also runs over frame relay.

In large networks, small branches can feed into larger branches, larger branches feed into main regional sites, and the regional sites feed into heavy-duty devices such as the IEN 5000. Primarily used as a high-power central site switch / router, the IEN 5000 can improve your line utilization and lower telecom costs.

IEN supports SNA and other legacy protocols, performing multiprotocol routing, and having an integrated CSU/DSU, data and voice compression, switching and dial back-up.

The 16-slot stackable chassis can contain up to 256 ports per node and is bus extendible to support thousands of branches. As for interfacing with public networks, the system can handle T-1 / E-1, ISDN or Frame Relay.

Much more flexible and scalable than traditional IP-routers, the IEN 5000, along with its circuit, packet and cell relay switching abilities, also uses Hypercom's parallel processing architecture -- a combination of high-speed packet and TDM buses -- to combine legacy (SNA, BSC, etc.), LAN, voice, fax and video traffic.

IEN 5000 uses several Hypercom traffic prioritization and congestion-avoidance techniques to ensure that all branches running voice alongside data over, say, frame relay get near toll quality capabilities. Data packets are segmented and compression rates varied dynamically to ensure reliable transmission of voice and data amidst changing network conditions.

Their software runs under Windows 95, Windows NT, Unix, HP Unix, and AIX. The system is SNMP manageable -- you can use HP OpenView Windows, HP OpenView Unix, and NetView for AIX.

System utilities include RMON (integrated trace capability), software and configuration downloads, an alarm log, WAN utilization indicator, and a security management system.

INTER-TEL

Inter-Tel's (Chandler, AZ -- 602-302-8900) Vocal'Net Internet telephony gateway is a standalone server solution that connects to just about any business telephone system that can support standard telecom interfaces such as T-1 E-1, ISDN, and analog. It uses Natural Microsystems Fusion cards for IP packet conversion of voice as well as other NMS cards for the public network interfaces.

Each Vocal'Net has an NMS TX2000 intelligent networking card instead of a standard PC Ethernet NIC. This connects via an MVIP ribbon cable to the other voice processing cards, so the host CPU doesn't get involved (or bogged down) in packetization of the full-duplex two way voice communications over the Internet or private intranets.

Inter-Tel has recently added a CAS call accounting package that should be of interest to service providers, and a new version should appear soon that's both H.323 and G.723.1 compliant.

VocalNet also supports "Touch-To-Talk" telephony-enhanced web pages. With a mouse click, you can talk live to call center agents from a web page.

The system needs an NT 4.0 Workstation PC, the boards and lines to the public network.

Inter-Tel VocalNets are priced between \$1,000 and \$4,000 per port, depending upon whether you buy it wholesale, retail, or with analog or digital interfaces. This includes the PC and NMS boards, software, installation and one year of maintenance.

LINKON

The LinkNet IP Telephony Gateway from Linkon (Fairfield, CT -- 203-319-3100) runs on SPARC stations running Solaris (Unix). The packetization is done on the host's powerful 64-bit processor and routing is already built into the SPARC.

Linkon's highly-flexible Maestro "universal port" card (which can do voice, fax or IP telephony) uses Lucent Technology's DSPs. One DSP is allocated per full-duplex conversation (two channels) and supplies 80 megaflops of floating point calculation power to the communication and conversion tasks. Each DSP can be equated to a RISC processor with 40 integer MIPS and as many as 72 DSPs or 2,880 MIPS can be integrated into a single Sun Server. These DSPs and their processing power reduces compression conversion delay to 30 milliseconds.

LinkNet IP is scaleable from four analog ports to four T-1 or E-1s, yielding up to 96 full-duplex channels. Linkon is actually building turnkey PCI-bus Sun systems.

TeraVox is the highest level API the company offers. It provides for IVR messaging application development, and speech recognition. TeraVox has been mated with Linkon's LinkNet Internet connectivity software to provide a gateway that has complete enhanced services capabilities, such as IVR for prepaid calling card applications.

Linkon has been busy adding a number of enhancements to Linknet, including;

All major telcos and service providers are clamoring for SS7 capable products, and Signalling System 7 (SS7) integration is a big feature of Linkon systems. SS7 capability allows for intelligent routing without consuming excess bandwidth for busy signals, speeds the call connection, and adds a layer of intelligence to call routing.

The system uses Telco-grade hardware-based echo-cancellation using the new TECO chip from Lucent Technologies, the same silicon used by major telcos in their network switches. Linkon has developed a daughtercard module using this chip that can support 32 ports of echo cancellation, enough to handle an E-1.

One interesting class of service feature is the ability for the caller to select using IVR a desired route for the call, whether it be the Internet, Intranet, or PSTN. If you're calling your mother-in-law, you can select the Internet. For a critical business call, you'd want a high quality PSTN call. The gateway will automatically rate the cost of each call for you and will ultimately print it on the bill.

Besides switching between various routes, you can also switch between various types of compression.

A gatekeeper feature pings other network nodes. If the latency and packet loss exceeds a specified set of parameters, then the gateways will default to sending calls over an alternate route, such as an intranet or the PSTN.

A fault resilient aspect of Linkon's gatekeeper is that it's functionality is distributed among all nodes, which check in on each other. If a route fails, or a component goes into a red alarm situation, then calls can be routed to an alternate gateway.

A Linkon system provides enhanced call detail recording with billing and bandwidth reports. It can give you reports of packet loss and latency by port, call length, and other billing-related data.

Linkon also offers an IP LinkNet Developer's Kit enabling UNIX software developers to create IP voice and fax applications. Included in the Kit are two 4-port analog FS4000 (Sbus) Maestro boards, and the LinkNet software along with the Solaris 2.5 drivers, IP fax application source code, and the LinkVox Direct Driver interface (DDI) API for IP communication control.

The DDI is the lowest level interface. To applications, it gives total control and quick access to real-time speech data in a single-threaded or multi-threaded environment. The DDI has over 100 command line utilities and over 100 callable "C" functions in its interface library.

The IP Linknet Developer's Kit also offers selectable audio compressions, the LinkNet Transcoder for real-time conversion of audio compressions, Solaris 2.5 drivers, IP phone-to-phone application demo source code, a specific application set for DTMF and echo cancellation, and IP Phone specific call progress for telephone networks. The Kit also includes an IP Telephony-specific API toolkit, LinkVox, to speed the development of IP Telephony switching and IP to PSTN telecom processing.

LinkVox is a sophisticated app development environment you'll use if you're going to be doing switching, messaging, fax, and interactive telecom. Its application interface model is single-threaded and capable of asynchronous speech. LinkVox features a specialized voice file manager that provides twice the performance of a standard UNIX file system. LinkVox has over 35 command line utilities for the control and monitoring of system activity, and there are over 100 callable "C" functions in its interface library.

LinkVox is recommended if you need to quickly develop a high channel-density standalone solution that demands 48 or more channels per chassis.

Options include a six-slot Expansion chassis, that provides up to 12 analog ports, and a 24-slot Expansion chassis that'll give you up to 72 digital ports with a T-1 interface.

Complete Linknet Gateways start at about \$1,000 to \$1,200 a port for a T-1 configuration.

LUCENT TECHNOLOGIES

The ITS-E gateways from Lucent (Basking Ridge, NJ -- 800-822-2000) works with Lucent's Definity ECS, Merlin Legend and most existing phone systems. It's a Windows NT server-based solution that sends voice and fax calls over IP networks using voice compression software developed by elemedia, a division of Bell Labs.

The ITS-E connects to your PBX via a T-1/E-1 Tie Line or analog line interface. On the IP network side, the ITS-E is connected via a standard 10 / 100BaseT Ethernet interface. ITS-E supports calling between two standard telephone sets or two fax machines. ITS-E also supports calls between a telephone and an H.323 standard Voice over IP PC program, such as Microsoft NetMeeting.

Lucent has an interesting Quality of Service technique. ITS-E gateways "ping" each other once per second over the IP network. Should latency rise over some user-defined length (the default is two seconds), the ITS-E's VoIP connections busy themselves out to their host PBX and IP network, port-by-port, or all at once. When this happens, the PBXs assume the role of routing calls through other means such as the PSTN or other ITSs. When the IP link recovers, the IP trunk comes back on the PBX.

Lucent's ITS-E works with Lucent phone systems' automatic Route Selection (ARS) system to offer one-stage dialing.

Lucent also has an interesting H.323 PC client called the virtual Telephone. It runs on top of Netmeeting 2.1. Mobile professionals forward their regular phone to it, then RAS into it from the road to their data network.

A related application is providing ISP PC-to-phone service to residential customers. Lucent has another system, the Internet Telephony Server - SP (ITS-SP), which is specifically intended for service providers, can be used either in conjunction with or instead of the ITS-E.

Using two Lucent ITS-E Internet Telephony Servers, calls at one location, (in this case, New York), are routed by the PBX to the ITS-E instead of the PSTN. The ITS-E either compresses the voice signal or demodulates the fax information, packetizes the resulting information and sends it over the IP network. The ITS-E at the other end (Tokyo), reverses the process and sends the signal to the PBX which routes it to the destination phone or fax machine. Thus, calls can be made without the costs associated with using the PSTN. ITS-E also supports a PC client on the IP network initiating a voice call to any of the phones via one of the ITS-Es. The ITS-E converts the call from compressed IP information to standard telephony format and tells the PBX the called party's phone number.

MICOM

The V/IP Phone/Fax IP Gateway card from Micom (Simi Valley, CA -- 805-583-8600) plugs into PCs (and your network) and uses DSPs to encode speech with Micom's ClearVoice DSP technology to enrolle in speech with

G.729 voice compression. V/IP will connect to phone systems on analog lines (single and dual channel FXS/E&M cards, or single and single or dual channel FXO interface cards are available) or T-1/E-1 connections.

The core building blocks of V/IP gateway are ISA-bus compatible voice interface cards and a suite of software for system configuration, call management, setup and termination, voice support, router / WAN priority protocols, and embedded SNMP network management.

Micom has a neat silence suppression technique that reduces bandwidth to about 7Kbps per conversation by suppressing packets when you pause speaking between words.

Operating systems supported include NetWare, Windows 95, Windows NT and even lowly MS-DOS. Indeed, Micom's software puts such a light burden on your CPU that you can run it on a 486.

It all costs about \$500 per port (based on an E-1 system).

MICROCALL

The Internet Phone Fax Gateway (IPFG) from MicroCall (Israel -- 011-972-9-760-1193) was developed conjointly with IBM's Haifa Research Lab.

With IPFG you simply pick up the telephone (or fax machine) to conduct all of your business, voice conversations and fax messages, with branch offices, business associates and customers at locations around the globe.

IPFG uses standard protocols: TPC, RTP on UDP, H.323 and G.729. It can be remotely managed and supports SNMP.

IPFG, the Total Package System includes IBM codec software, Micro Call DSP2000 boards and a PC Server. The gateway also comes with a sophisticated billing management system. If you don't like it you can use the server's RS-232 interface to connect to external billing systems.

System Configurations come in modular, total packages of 8 Ports (analog), 16 Ports (analog) and 24/30 Ports (T-1 / E-1). PSTN interfaces include two-wire loop start, two-wire E&M, and ISDN PRI/BRI.

MOTOROLA

Motorola (Mansfield, MA -- 508-261-4583) has a new 8 port Voice-over-IP router, the Vanguard 6430. Part of the new 6400 Series, it's "medium-sized" compared to its big brother, the MProuter for central sites that uses T-1 connections.

The whole Vanguard 6400 Series introduces multiservice edge networking to provide solutions for networking multimedia, IP and serial traffic simultaneously over the WAN. But if need be, the 6430 can act as an ordinary IP data router to tie a branch office into a WAN.

Motorola currently uses a proprietary CVSELP 8 Kbps or 16 Kbps codec. H.323 support (from Inter-Tel) has been announced. The cards have FXS/FXO analog line interfaces.

A key feature of Vanguard 6400 Series products is Motorola's advanced ONS (open networking) software architecture having a dual-core switching, routing and bridging scheme to optimize real-time applications, trim networking costs and streamline management by letting users choose only protocols and applications needed during a particular session.

Motorola's ONS real-time router operating system is powered by a 40 MHz Motorola PowerPC RISC processor -- option cards each have a RISC processor and a high-performance 1 gigabit (Gb) bus.

The 6400 Series' customizable IP prioritization over LANS or WANS and IP Gateway capability both help to optimize Quality of Service when networking within IP and with multiservice features. It's VoiceRelay software integrates voice with data, fax and video traffic while maintaining voice quality, with advanced telephony features for PBX integration.

The Vanguard 6400 Series products start at \$1,995 for the single port \$320, \$2,799 for the 6430 with three expansion slots and \$3,499 for the 6450 model with five expansion slots. The bigger 6560 MProuter costs \$19,700 and will handle up to four T-1s.

NETRIX

The Network Exchange 2210 multi-service IP gateway and Vortex Voice Gateway software was recently announced by Netrix (Herndon, VA -- 703-742-6000).

Since the 2210 is a "multi-service" switching platform, it can also simultaneously do frame-relay as it does IP communications. The 2210 offers a neat combination of switching, switched compressed voice, and

multi-protocol support in a single compact platform.

The 2210's multi-service switching provides support for IP, Frame Relay, X.25, and ISDN network services. Software-selectable protocols and transmission technologies allow the 2210 to provide inexpensive leased line, public, or hybrid networking solutions for data, voice, and image applications,

Each node supports in excess of 180 simultaneous voice calls and provides a choice of compression algorithms allowing a network manager to choose the right mix of bandwidth efficiency and voice quality.

The Network Exchange 2210 supports up to 64 serial data/trunk ports at speeds up to 2 Mbps, over 180 voice channels, and a LAN interface. As with all Netrix Network Exchange platforms, the 2210 is software-defined -- each data port on the 2210 can be independently software-configured for any allowable subscriber or trunk protocol and will run simultaneously with any other protocol on other ports.

The algorithms support compression rates from 4.8 Kbps to 12 Kbps and can be assigned to each address individually. Besides voice support, the 2210 can detect fax modem tones at any stage of the call and then carry that traffic across the network.

As part of the Network Exchange family, the 2210 integrates with its bigger brethren, the Network Exchange 2550 (combines cell-based ATM, Frame Relay, X.25, TDM, and ISDN for data, voice and image applications) and the 2410 (handles Frame Relay, X.25, TDM, and ISDN) to allow corporations to develop solutions that scale from low-speed asynchronous traffic all the way to high-speed ATM networking.

For voice capability, the price will run in the \$500 per port range.

Note: As we went to press, NETRIX announced an alliance with TeleVideo Global, a service provider that will provide worldwide Voice/Fax-over-IP (VoIP) services using NETRIX's Network Exchange 2210 with Vodem software.

NETRUE

NeTrue Communications' (Fullerton, CA -- 714-870-0861) NeTrueCom IP Telephony gateway offers telco grade, standards based IP voice, voice messaging, real-time lax and store-forward fax functions. NeTrue has integrated its core technology, including IP Telephony Network Management (ITNM) and Gatekeeper, with Dialogic's DM3 platform (there's also a beta version using NMS's Fusion 2.0 DSP-based cards). The DM3 mediastream architecture is a core set of specifications and firmware modules that enables firmware resource portability across multiple supported platforms. It eases multicard integration via the SBus.

The system is H.323 protocol compatible and uses G-723.1 codec technology.

Once nicety is that if the IP call routing can't find a good connection, the system will fall back to placing a regular PSTN call.

Netrue's ITNM improves the overall grade of service on an IP telephony network. It can monitor the entire network including PSTN ports, IP ports, gateways and IP links. Furthermore, it conducts traffic control and manages the dynamic routing for the hybrid networks. NeTrue's gatekeeper offers global address resolution, billing, authentication / administration, and SS7 support. Thus, NeTrueCom can be a true turnkey system for service providers and corporations that want to immediately get into IP telephony.

Another advantage of using NeTrue's gateways is that you get instant access to NeTrue's Global IP Telephony Network with 50 nodes in 22 countries.

NeTrue products also include: NeTruePhone, a PSTN Internet phone gateway solution; NeTrueLink, a fax/voice Internet messaging gateway; NeTrueFax, a patented Internet fax routing technology and NeTrueView, an Internet telephony network management technology.

Analog Loop-start or T-1 / E-1 line interfaces are available, with the T-1s starting at \$25,000.

NETSPEAK

The WebPhone Gateway Exchange (WGX) Server from Netspeak (Boca Raton, FL -- 561-997-4001) brings calls placed using ordinary phones into an IP network, and brings calls placed using a WebPhone application into an existing telephone system.

The WGX uses a 200 MHz Pentium (minimum), 64 MB RAM (recommended), a

CD-ROM, a Natural Microsystems' AG-T1 (or AG-E1) with RT320 daughtercard, an NMS Tx2000 10-BaseT NIC and an optional NMS T-Connect for analog systems. It runs NT 4.0.

Using a WGX, you can place calls from a WebPhone to a PSTN telephone, from a PSTN phone to WebPhone, from a PSTN phone to a PSTN telephone, and from a Web page to a PSTN phone (a WebPhone-enabled Web page allows calls to be placed by clicking a link located on the Web page).

A call from a WebPhone to a PSTN phone, or a call from a PSTN phone to a WebPhone needs at least one WGX. A PSTN phone connection over the Internet to another PSTN telephone requires two WGX servers.

The WGX supports the Microsoft GSM codec, has programmable IVR answering with and without audiotex, so you can insert prompts to welcome a caller, provide information about a product or prompt the caller to make a selection to further direct the call.

Each WGX maintains a configuration file with the local telephone information based on the WGX connection to the PSTN network. Each WGX reports this routing information to a NetSpeak Connection Server. All WGX servers have access to routing information through the Connection Server, eliminating the need to reconfigure existing WGX servers when a new WGX server is added.

This Connection Server (CS) allows companies to provide connection services, account management and Webboard advertising (an advertisement window located on the WebPhone screen area) to their WebPhone users and ACD server splits. The CS allows the WebPhone and WebPhone Gateway exchange (WGX) servers to contact other parties by e-mail address, IP address and telephone number. The server stores the necessary information and tracks which accounts are currently online.

When a connection request to an email address is made, the CS translates the requested e-mail address to an IP address, and a direct connection between the caller and the target can be made. When a connection request to a phone number is made, the CS returns the address for the WGX server closest to the target based on the E.164 telephone number -- specifically, the country code, area code and subscriber number. A connection to the telephone number, through the appropriate WGX server, can then be made.

The CS is actually the keystone of most NetSpeak networks. Some NetSpeak components, such as the ACD and the WGX servers, need a CS to operate.

The NetSpeak ACD Server (no physical ACD is needed) routes calls from internet users with NetSpeak WebPhones to special Agent WebPhones on call center agent desktops. Add a WGX and conventional PSTN calls can be routed directly to Agent WebPhones.

The configuration and call flow management tools are GUI-based. The software can monitor network and track call status. Available information includes port number, status, incoming and outgoing identification, call start time and more. Call flows can be designed specifically for your business. Calls can be directed to a designated person or use a PIN code to complete a transaction.

The WGX servers support programmable IVR, Gateway Message Detail Recording (GMDR), Supervisory Tone Detection and Generation, both GSM and Truespeech 8.5, Buffer Management; and full Operations, Administration, Maintenance and Provisioning (OAM&P) through the NetSpeak Control Center, used to configure, administer, manage and maintain server features and acts as a central "hub" to monitor NetSpeak servers and coordinate communications between them.

The system can do real-time event logging to a Netspeak Database Services (DBS) server, and it supports real-time user call account management.

NUERA

Nuera's (San Diego, CA -- 619-625-2400) Access Plus F200ip Voice, FRAD/VoIP was still in beta the last we heard. Nuera was one of the pioneers of voice switching for frame relay and IP on an integrated platform. The F200ip Will do both voice and fax-over-VoIP using E-CELP DSP based encoding.

OKI

OKI Network Technologies' (sunnyvale, CA -- 408-737-6383) new and improved Internet Voice Gateway BSL200 transmits voice and fax over TCP/IP

networks.

OKI's BS1200 is a neat one-box "plug & play" solution for integrated voice and fax capability in an existing LAN environment, and connects to existing PBX-based analog phone lines and digital data networks without having to add a separate server.

The OKI BS1200 provides four 8 Kbps compressed voice channels (with G 729 CS-ACELP speech encoding/ decoding industry standard). and one optional fax transmission channel over the same IP link.

Oki's Internet Voice Gateway BS1200 offers G3 mode real-time fax transmission, so you don't have to store or convert fax data.

Interestingly, OKI's DSP-based gateways are not on a PC chassis, but solid state boxes with no moving parts. At the moment they only accept analog trunks (but a T-1 / E-1 model is on the way), and their ports provide a battery for loop-start lines or you can use the E&M format. Voice compression is G.729 loaded on one DSP per unit. The OKI BS1200 also has OKI's own echo-cancellation and jitter-buffering routines.

OKI's gateways cost about \$7,400 (\$1,850 per line).

ROCKWELL

Rockwell's (Wood Dale, IL -- 630-227-8000) **Internet Gateway** bridges the gap between the Internet and your call center by letting Web users and agents to talk and interact directly over the Internet without using a phone or a second line. Call centers can now perform complete transactions instead of just processing voice traffic. It can even present Web-based IVR-like screens to properly direct calls to specialized agents.

The Gateway server also offers businesses an alternative to route their inbound and outbound phone campaigns over the Internet instead of more costly networks.

The **Internet Gateway** server allows Internet calls to take full advantage of the sophisticated routing capabilities of Rockwell ACDs without any infrastructure changes (Rockwell's **Internet Gateway** can be used with other ACDs as well). Screenpops, database lookup, and agent specialization based on inbound information are all available with Web calls. Standard management tools capture the same information about Web-originated calls as they do for traditional public-network originated calls-plus Internet information.

The Rockwell **Internet Gateway** gives call centers the same control over an Internet call as is available for ordinary phone calls. Any operation, function or feature that can be attributed to a traditional call can be provided for a Web call.

Future **Internet Gateway** server releases will allow agents to change the caller's Web screens; jointly edit text and graphics; download data, software and full motion video to customers. compute collaboratively and view the customer while conversing,

Rockwell's **Internet Gateway** server is bridge with WebPhone, a software application which allows Windows-based multi-media PCs to perform standard telephone functions. The WebPhone is an onscreen "telephone" that lets the user place, forward, conference and receive real-time voice calls simply by using a mouse and speaking into a microphone.

Rockwell's **Internet Gateway** consists of server software, agent WebPhones and server hardware at the call center and WebPhone software on the Web caller's PC. The **internet Gateway** server hardware is integrated into the call center's ACD and is provided by either Rockwell or the customer.

SIEMENS

The Hicom Xpress Telephony Internet Server (TIS) from Siemens Business Communications (Santa Clara, CA -- 408-492-2000) is based on the Vienna way DSP-based IP gateway technology and is designed for Siemens' Hicom 300 E communications server. It sends voice and real-time fax over intranets or the internet with a codec that can squeeze voice into a 7.3 Kbps channel.

It allows up to 46 non-blocking ports. Any line can be dynamically switched from voice to fax. If you IP network is down or congested, the call can be routed through your PBX and over the PSTN.

T-1 and PRI interfaces are available now, an an E-1 nterface should be available by the time you read this.

A 12-port TIS system starts at \$22,850; \$71,350 for 46 voice and 28 fax ports.

SKYWAVE

Skywave Communications (Sunnyvale, CA -- 408 245 1771) is based in Tokyo with an office in California. Their SkyGate 98 VoIP gateway is a scalable, self-contained, turnkey gateway for VARs, system integrators and service providers.

SkyGate 98 provides VoIP gateway functionality to an external host computer platform that through Gateway Controller interface (GCI), an open API enabling a host app to control the gateway through an IP socket connection. Until now, IP Telephony consisted of closed and proprietary solutions, but using the GCI, different gateway hardware configurations can be combined and a variety of third party apps can be added and centrally controlled.

SkyGate 98 can handle real-time voice and fax support, hybrid echo cancellation, G.723.1, G.729a, silence compression and DTMF generation and detection (H.323 and real-time fax will be available June 1998).

SkyGate 98 is scalable to 96 lines per chassis and up to 960 lines per location.

The actual VoIP functionality is provided via SkyWare 98 software that provides VoIP gateway functionality for VARs, systems integrators and service providers looking to build complete VoIP solutions.

SkyWare 98's open API allows the creation of applications and enables gateway manufacturers and VARs access to the interoperability and control offered by the GCI and SkyGate's NetManager 98 gatekeeper product.

Finally, SkyGate's NetManager 98 is the gatekeeper that monitors information going in and out of the gateway. Positioned outside of the gateway, NetManager 98 allows the addition of value added services such as, voice mail, teleconferencing, least cost routing, billing management, and pre-paid phone cards. It also allows centralized communication from throughout the system, so VARs and Service Providers can easily monitor and upgrade software.

A 24 line SkyGate 98 gateway is priced at \$48,500.

VIADSP

The PacketTel-1000 Gateway from ViaDSP (Concord, MA -- 978-369-0048) is a self-contained, carrier grade platform designed to give VARs, system integrators, and service providers an open platform to build complete VoIP gateway solutions. Natural Microsystems just bought into this company.

The PacketTel-1000 Gateway provides VoIP gateway functionality to an external host computer through a Socket-based API called the Gateway Control Interface (GCI), which allows for the gateway to be managed by any application or remote host regardless of the operating system.

Architected in accordance with the evolving VoIP Forum standards, PacketTel-1000 scales from 24 to 96 ports of voice and fax to be configured, based on the use of standard hardware modules. The gateway host is separate from the application host.

The Packettel hardware architecture uses standard CTI building blocks. Hardware support includes T-1, E-1, ISDN, and analog PSTN connections and Ethernet IP connections. The gateways' software architecture consists of three components: The Packet InvisiLink layer that performs real-time voice, echo cancellation, and fax processing; a PacketTel Server layer that controls the gateway performs routing, call connection, call recording, and remote management services; and the Socket-based Gateway Control Interface (GCI).

A system costs about \$2,000 per port.

VIENNA SYSTEMS

Vienna Systems' (Kanata, Ontario -- 613-591-3219) Vienna.way Gateway is a highly scaleable system for routing voice and real-time fax over IP networks and the PSTN. Supports from 16 to 60.

It comes as an addition to Vienna.way's Call Processing Server, allowing voice calls to be distributed from the IP networks to the PSTN. It consists of the usual batch of NICs, a T-1, ISDN PRI or BRI card as well as a DSP card installed in a standard PCI/ISA tower or rackmount chassis. The systems we tested came aboard 19" rackmounts from industrial Computer Source (ICS) with 128 MB RAM and NT.

The Gateway sets up the call to the Call Processing Server and packetize the voice into IP packets.

The DSP card processes calls to and from the telephone network and provides voice compression, echo cancellation, silence suppression, tone detection and generation. The Gateway performs conference bridging, call

control, and provides all the information about the state of a call and associated timers, physical connections to the network, and signaling.

Tone detection and generation DSPs detect tones received from and generate tones for dialing on PSTN; a conference bridging DSP on the Gateway allows voice and data conferences among multiple callers. It automatically detects the loudest speakers, mixing audio streams and sending this out to the network to reduce background noise.

The system has echo cancellation (ITU G.165 compliant), and voice compression is performed by Lucent 7.3 codecs which are configured on the DSP cards by the administrator.

The "Services Control Node" is additional software performs caller authorization, dialed number translation, authentication, routing and billing functions. This enables specific applications such as voice and fax long distance over IP, virtual office access for telecommuters, branch office connectivity, network optimization, and voice, data and video conferencing.

The ISDN BRI card can handle eight BRI circuits per card (16 channels) and fits into an ISA slot. The whole system can handle up to 60 channels (two E-1s) with the PRI / E-1 card PCI bus card.

The PCI bus DSP card can come with an optional daughter module with four additional DSPs and an SCbus connector.

Vienna way 2.0 gateways license RADLink's PASSaFax technology to handle real-time fax over IP as well as voice.

Gateway pricing runs around \$1,000 per port.

VOCALTEC

VocalTec (Northvale, NJ -- 201-768-9400) got into the gateway business after the huge success with the world's first Internet PC phone. The VocalTec Telephony Gateway Release 3.1 is an NT based system that bridges the gap between the PSTN and the Internet/intranets to enable long-distance calling from phone-to-phone, fax-to-fax, PC-to-phone, phone-to-PC, and Web browser-to-phone.

Using this system is simple -- once connected to the Gateway, the automated attendant asks the caller for the destination phone number. The caller enters the number just as they ordinarily would. The local Gateway automatically determines which remote Gateway should handle the call. Other user services include an IVR system that guides you through the calling process and fax support, sending faxes in either real-time or store-and-forward mode depending on what you want.

The Vocaltec Telephony Gateway uses an auto detection mechanism to avoid disconnects during long periods of silence.

The system also includes Surf&Call, is a Web browser plug-in that gives users the ability to call from a website to a regular phone.

Users can access their voice mail with the Gateway's enhanced DTMF technology. Remote PC users now have convenient work access with the VocalTec Internet Phone.

Companies using VocalTec Telephony Gateway technology include corporations with multiple offices, ISPs offering value-added / NextGen services, telecommuters, and call center operations.

Version 3.2 of the Gateway will allow for trunk-replacement (one-stage dialing) as well as fax on universal ports and a debit card API.

An eight-line Gateway goes for about \$1,000.

RELATED ARTICLE: COPIA

Copia International (Naperville, IL -- 800-689-8898) makes FaxFacts, a combination fax-on-demand, fax broadcast, and outbound LAN fax server system. They integrate usefully with the Internet in five different ways. First, they do fax-to-email conversion -- a FaxFacts fax-box can accept faxes from your correspondents, and convert them to .TIF files (or .PDF) attached to email for delivery. This lets ISPs offer an interesting value-added service to their email-centric customers. Second, they do email-to fax -- a subscriber can send an email with attached files to the server, which will render them as .TIF and send them to a fax number, responding via email with confirmation of delivery. The reverse of this service is also supported: an ISP can give an inbound email address to a subscriber -- emails received at this address will be rendered as fax and delivered. Third, they handle WebFax -- requests made by surfers on your website can stimulate the FaxFacts server to send them data-sheets via fax. Fourth, they do "FFWeb" -- a unique service that lets a fax-on-demand

.. caller request a faxed copy of one of your web pages. Finally, they do "hub-to-hub store and forward" faxing. Here, two or more Copia systems cooperate to transfer faxes across the 'Net.

We use the Copia products in-house at Teleconnect, and can vouch for their reliability. They have one of the most complete and impressive 'Net-enabling packages around.

RELATED ARTICLE: NATURAL MICROSYSTEMS

Natural MicroSystems (Framingham, MA -- 508-620-9300) makes Fusion 2.0, one of the best IP telephony development platforms on the market. Fusion 2.0 has H.323 support and codecs such as G.723.1, G.729a, Microsoft GSM, and VoxWare's MetaVoice RT24 algorithm. Fusion enables developers to create gateways with configurations ranging from eight ports to multiple T-1s/E-1s without appreciable latency or degradation in performance.

Fusion is now integrated with CT Access, Natural MicroSystems' open and extensible development environment, which provides easy integration with other media types, including fax.

A Fusion-powered IP Telephony platform consist of an Alliance Generation DSP board serving as the PSTN interface and media processor, an Alliance Generation Realtime/2 daughtercard for realtime vocoding, and a TX Series board handling IP routing and data protocols for such things as IP network integration. Fusion supports a full T-1 in two ISA slots, and up to four T-1s in a single chassis. By using an NMS TX3000 you can scale up to four T-1s using only five ISA slots.

List price is about \$685 per port for T-1 developer kits.

COPYRIGHT 1998 Telecon Library Inc.

SPECIAL FEATURES: graph; illustration

DESCRIPTORS: Hardware Buyers' Guide; Gateway Device

PRODUCT/INDUSTRY NAMES: 3661254 (Bridges/Routers/Gateways)

SIC CODES: 3661 Telephone and telegraph apparatus

FILE SEGMENT: CD File 275

Set	Items	Description
S1	1933	INTERNET()GATEWAY
S2	11	S1 AND VICOMSOFT
S3	8	S2 NOT PY>2000
S4	6	S3 NOT PD>20000927
S5	6	RD (unique items)
S6	31	S1 AND (PING OR PACKET())INTERNET()GROPER)
S7	30	S6 NOT PY>2000
S8	26	S7 NOT PD>20000927
S9	26	RD (unique items)
File	2:INSPEC 1969-2003/Dec W1	
	(c) 2003 Institution of Electrical Engineers	
File	6:NTIS 1964-2003/Dec W2	
	(c) 2003 NTIS, Intl Cpyrght All Rights Res	
File	8:EI Compendex(R) 1970-2003/Nov W5	
	(c) 2003 Elsevier Eng. Info. Inc.	
File	34:SciSearch(R) Cited Ref Sci 1990-2003/Dec W1	
	(c) 2003 Inst for Sci Info	
File	35:Dissertation Abs Online 1861-2003/Oct	
	(c) 2003 ProQuest Info&Learning	
File	65:Inside Conferences 1993-2003/Dec W1	
	(c) 2003 BLDSC all rts. reserv.	
File	92:IHS Intl.Stds.& Specs. 1999/Nov	
	(c) 1999 Information Handling Services	
File	94:JICST-EPlus 1985-2003/Dec W2	
	(c)2003 Japan Science and Tech Corp(JST)	
File	95:TEME-Technology & Management 1989-2003/Nov W5	
	(c) 2003 FIZ TECHNIK	
File	99:Wilson Appl. Sci & Tech Abs 1983-2003/Oct	
	(c) 2003 The HW Wilson Co.	
File	103:Energy SciTec 1974-2003/Nov B2	
	(c) 2003 Contains copyrighted material	
File	144:Pascal 1973-2003/Nov W5	
	(c) 2003 INIST/CNRS	
File	202:Info. Sci. & Tech. Abs. 1966-2003/Nov 17	
	(c) 2003 EBSCO Publishing	
File	233:Internet & Personal Comp. Abs. 1981-2003/Jul	
	(c) 2003, EBSCO Pub.	
File	239:Mathsci 1940-2003/Jan	
	(c) 2003 American Mathematical Society	
File	275:Gale Group Computer DB(TM) 1983-2003/Dec 12	
	(c) 2003 The Gale Group	
File	434:SciSearch(R) Cited Ref Sci 1974-1989/Dec	
	(c) 1998 Inst for Sci Info	
File	647:CMP Computer Fulltext 1988-2003/Dec W1	
	(c) 2003 CMP Media, LLC	
File	674:Computer News Fulltext 1989-2003/Dec W1	
	(c) 2003 IDG Communications	
File	696:DIALOG Telecom. Newsletters 1995-2003/Dec 15	
	(c) 2003 The Dialog Corp.	

9/5,K/1 (Item 1 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02373275 SUPPLIER NUMBER: 59519953 (USE FORMAT 7 OR 9 FOR FULL TEXT)
The Great Promise of Convergence. (Company Business and Marketing)
ANDREWS, WHIT
Internet World, 6, 3, 19
Feb 1, 2000
ISSN: 1097-8291 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 678 LINE COUNT: 00077

ABSTRACT: The convergence of content and Internet access under one provider is a risky business, yet that is precisely what AOL and Time Warner are proposing to do with their mega merger. However, AOL has a history of successfully flouting conventional business practices.

COMPANY NAMES: Time Warner Cable--Acquisitions, mergers, divestments;
America Online Inc.--Acquisitions, mergers, divestments
GEOGRAPHIC CODES/NAMES: 1USA United States
DESCRIPTORS: Company acquisition/merger
EVENT CODES/NAMES: 150 Acquisitions & mergers;160 Asset sales &
divestitures
PRODUCT/INDUSTRY NAMES: 4834000 (Cable Television Services); 4811520
(Online Services)
NAICS CODES: 51321 Cable Networks; 514191 On-Line Information Services
FILE SEGMENT: CD File 275

... access?

These companies are betting they can, in a mega-merger that unites the most powerful consumer **Internet gateway** with a media empire that includes magazines such as Time, cable television networks such as TNT and ...

...magazine titles, such as People,
Sports Illustrated. Time, and Fortune.
E-Commerce AN OPPORTUNITY to promote shop-
ping channels across multiple properties.
WHAT TIME WARNER GETS
Television EXPERTISE FOR INTERACTIVE TV,
including executives who know...

9/5,K/2 (Item 2 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02310332 SUPPLIER NUMBER: 55073435 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Broadband options offer faster Net access, but with always-on connections, your data may be at risk. Here's how to get adequate protection. (Internet/Web/Online Service Information)
Pacchiano, Ron
Computer Shopper, 234
August, 1999
ISSN: 0886-0556 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 2319 LINE COUNT: 00179

GEOGRAPHIC CODES/NAMES: 1USA United States
DESCRIPTORS: Bandwidth technology; Internet/Web technology; DSL; Internet service provider
EVENT CODES/NAMES: 360 Services information
PRODUCT/INDUSTRY NAMES: 4811522 (Internet Access Providers); 4810000
(Telecommunication Services ex Broadcast)
NAICS CODES: 51331 Wired Telecommunications Carriers; 5133
Telecommunications
FILE SEGMENT: CD File 275

... using the same IP address, which makes you much easier to identify. A hacker simply needs to **ping** a particular address to see if it's in use. If it is, and your connection is... Even though you can prevent the cable modem from dialing up, you should still be able to **ping** it at any time so long as there's power to it. So to be completely safe...

...or even DBS connections. WinGate 3.0 essentially turns an existing computer on your network into an **Internet gateway**. The system does not need to be dedicated to proxy services, so it can still be used...

9/5,K/3 (Item 3 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02178496 SUPPLIER NUMBER: 20579805 (USE FORMAT 7 OR 9 FOR FULL TEXT)
IP voice/fax gateways; a buyer's guide. (Buyers Guide)
Grigonis, Richard Zippy
Teleconnect, v16, n5, pS22(11)
May, 1998
DOCUMENT TYPE: Buyers Guide ISSN: 0740-9354 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 9283 LINE COUNT: 00734

ABSTRACT: A buyer's guide is presented of gateways for IP voice and fax. Several gateway options are available; standalone IP telephones, standalone network devices, multi-purpose NIC cards and PC server-based gateways built using specialized DSP cards or those built according to an industry standard.

SPECIAL FEATURES: graph; illustration
DESCRIPTORS: Hardware Buyers' Guide; Gateway Device
PRODUCT/INDUSTRY NAMES: 3661254 (Bridges/Routers/Gateways)
SIC CODES: 3661 Telephone and telegraph apparatus
FILE SEGMENT: CD File 275

... PC program, such as Microsoft NetMeeting.
Lucent has an interesting Quality of Service technique. ITS-E gateways "**ping**" each other once per second over the IP network. Should latency rise over some user-defined length... cost about \$7,400 (\$1,850 per line).

ROCKWELL
Rockwell's (Wood Dale. IL -- 630-227-8000) **Internet Gateway** bridges the gap between the Internet and your call center by letting Web users and agents to...

...to route their inbound and outbound phone campaigns over the Internet instead of more costly networks.

The **Internet Gateway** server allows Internet calls to take full advantage of the sophisticated routing capabilities of Rockwell ACDs without any infrastructure changes (Rockwell's **Internet Gateway** can be used with other ACDs as well). Screenpops, database lookup, and agent specialization based on inbound...

...Web-originated calls as they do for traditional public-network originated calls-plus Internet information.

The Rockwell **Internet Gateway** gives call centers the same control over an Internet call as is available for ordinary phone calls...
...feature that can be attributed to a traditional call can be provided for a Web call.

Future **Internet Gateway** server releases will allow agents to change the caller's Web screens; jointly edit text and graphics...

...software and full motion video to customers. compute collaboratively and view the customer while conversing,

Rockwell's **Internet Gateway** server is bridge with WebPhone, a software application which allows Windows-based multi-media PCs to perform
...

...receive real-time voice calls simply by using a mouse and speaking into a microphone.

Rockwell's **Internet Gateway** consists of server software, agent WebPhones and server hardware at the call center and WebPhone software on the Web caller's PC. The **internet Gateway** server hardware is integrated into the call center's ACD and is provided by either Rockwell or...

9/5,K/4 (Item 4 from file: 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

02167548 SUPPLIER NUMBER: 20314245 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Get to the Net. (Bay Networks' Instant Internet 100 communications server) (Product Announcement)

Freed, Les

PC Magazine, v17, n5, p73(1)

March 10, 1998

DOCUMENT TYPE: Product Announcement ISSN: 0888-8507 LANGUAGE:

English RECORD TYPE: Fulltext

WORD COUNT: 857 LINE COUNT: 00069

SPECIAL FEATURES: other; illustration

COMPANY NAMES: Bay Networks Inc.--Product introduction

DESCRIPTORS: Communications Server; Networking Hardware Product

Introduction

PRODUCT/INDUSTRY NAMES: 3661251 (Communications Servers)

SIC CODES: 3661 Telephone and telegraph apparatus

TICKER SYMBOLS: BAY

TRADE NAMES: Bay Networks Instant Internet100 (Communications server)--

Product introduction

FILE SEGMENT: CD File 275

... 33.6 Kbps

version and \$950 street for the ISDN and 56K versions) is an IPX-to-**Internet**

gateway that provides a fast, easy way to add Internet access to your IPX

LAN--without installing IP...

...Internet comes with a suite of diagnostic and monitoring tools, including an excellent IP diagnostic that provides **ping**, link stress, and

route-tracing functions in one program. A real-time monitoring program lets

you check...

...you can

check phone-line status.

DIAGNOSIS, PLEASE: Included with this package is a program that provides **ping**,

link stress, and route tracing.

9/5,K/5 (Item 5 from file: 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

02106596 SUPPLIER NUMBER: 19765758 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Approaching ground zero with today's technology tools. (Oscar Frommel Smith High School's technology implementations) (Technology Information)

Geyer, Roger W.

T H E Journal (Technological Horizons In Education), v25, n1, p56(4)

August, 1997

ISSN: 0192-592X LANGUAGE: English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 3156 LINE COUNT: 00262

ABSTRACT: Oscar Frommel South High School's students, faculty, staff and parents in Chesapeake VA are challenged to adopt new technology while integrating innovative software tools with existing hardware to maintain the school's intranet. The school established an **Internet gateway** in 1996 via a Sun SPARC server using I*Gear software that filters incoming and outgoing data, adds and manages student and teacher accounts and monitors system use through HTML format. The system, connected to a dedicated 28.8-Kbps modem, depends on its proxy server to efficiently cache HTML documents. The school's three Novell NetWare networked servers run TCP/IP and are capable of pinging the gateway server. Teacher's advanced preparation and appropriate site selection allows this limited bandwidth approach to work surprisingly well. Since the high school has installed Microsoft's NT Server 4.0, it also received a free Communications Tools for Schools (CTS) suite that is targeted specifically at K-12 education.

SPECIAL FEATURES: table; illustration

DESCRIPTORS: Technology Application; Technology in Education

PRODUCT/INDUSTRY NAMES: 8212000 (Secondary & Technical Schools)

SIC CODES: 8211 Elementary and secondary schools

FILE SEGMENT: CD File 275

...ABSTRACT: integrating innovative software tools with existing hardware to maintain the school's intranet. The school established an **Internet gateway** in 1996 via a Sun SPARC server using I*Gear software that filters incoming and outgoing data...

... library is under review.

Our Infrastructure

We gained Internet access during the first semester of 1996. Our **Internet gateway** is established through a Sun SPARC server running I*Gear software. This software suite for K-12...

...Center and one for our two instructional labs. All networked workstations are running TCP/IP and can " **ping** " our gateway server.

Recently, we installed Microsoft's NT Server 4.0. Given the existing hardware, we...

9/5,K/6 (Item 6 from file: 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

02087741 SUPPLIER NUMBER: 19433655 (USE FORMAT 7 OR 9 FOR FULL TEXT)

The route stuff. (NT-based routing products) (Technology Information) (Column)

Lafferty, David

Network, v12, n6, p141(2)

June, 1997

DOCUMENT TYPE: Column LANGUAGE: English RECORD TYPE: Fulltext;

Abstract

WORD COUNT: 1901 LINE COUNT: 00155

ABSTRACT: Windows NT-based routing solutions offer small businesses and home offices the ability to route information on an NT server, rather than using dedicated network hardware. While network operating system-based routing is not a new capability, Windows NT's LAN Manager foundation did not lend itself to native routing. Static routing is a good way to connect two or more networks, but connecting larger, multi-router networks requires dynamic route updates. Multi-Protocol Router (MPR) services work well with NT, but they lack the finesse of network routing hardware, such as the proper handling of non-Microsoft protocols and cost-based routing. Third-party vendors and Microsoft have developed branch office NT-based routing offerings that aim to meet these routing needs.

SPECIAL FEATURES: other; illustration

COMPANY NAMES: Microsoft Corp.--Products

DESCRIPTORS: Product Application; Operating System

SIC CODES: 7372 Prepackaged software

TICKER SYMBOLS: MSFT

TRADE NAMES: Microsoft Windows NT (Operating system)--Usage
FILE SEGMENT: CD File 275

... with a few configuration steps it's possible to turn the RAS server into an inexpensive, simple **Internet gateway** for small networks.

Since the modem installed in the server isn't treated as a typical LAN...Also, administration and troubleshooting are primarily based on the NT command prompts using such facilities as TRACRT, **PING**, and ROUTE.

For an NT-based router solution to be beneficial, support and administration should be fairly...

9/5,K/7 (Item 7 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02040073 SUPPLIER NUMBER: 19156433 (USE FORMAT 7 OR 9 FOR FULL TEXT)
MacInTouch: checking Ping of Death, Power Mac glitches. (Mac OS impacted by Ping of Death attack via TCP/IP network) (MacInTouch) (Product Support) (Column)
Ford, Ric
MacWEEK, v11, n8, p31(1)
Feb 24, 1997
DOCUMENT TYPE: Column ISSN: 0892-8118 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 733 LINE COUNT: 00062

ABSTRACT: Apple has still not provided solutions for a **Ping** of Death attack over a TCP/IP network, which can cause problems for the Mac OS. **Ping** of Death can crash a variety of systems, including Macs. The problem was reported in Dec 1996, and so far has not been crippling for users. Routers may be of assistance by filtering out bad packets, and MkLinux and AIX running on Apple Network Servers have provided updates to address the **Ping** of Death problem. In addition, third-party Mac OS products are available on the market, such as AG Group's EtherPeek 3.1. In other news, some users may be experiencing network problems related to PCI-based Power Macs and clones. The problem is being looked into by YARC Systems, which develops coprocessor cards. Changing to a PCI Ethernet card instead of built-in Ethernet may help alleviate network performance problems.

COMPANY NAMES: Apple Computer Inc.--Products
DESCRIPTORS: Product Tips; Operating System; Virus; PowerPC-Based System; Ethernet Adapter
PRODUCT/INDUSTRY NAMES: 7372500 (Operating Systems & Utilities)
SIC CODES: 7372 Prepackaged software; 3571 Electronic computers
TICKER SYMBOLS: AAPL
TRADE NAMES: Apple Macintosh Power Macintosh (PowerPC-based system)--Design and construction; System 8 (Operating system)--Usage
FILE SEGMENT: CD File 275

MacInTouch: checking Ping of Death, Power Mac glitches. (Mac OS impacted by Ping of Death attack via TCP/IP network) (MacInTouch) (Product Support) (Column)

ABSTRACT: Apple has still not provided solutions for a **Ping** of Death attack over a TCP/IP network, which can cause problems for the Mac OS. **Ping** of Death can crash a variety of systems, including Macs. The problem was reported in Dec 1996...
...bad packets, and MkLinux and AIX running on Apple Network Servers have provided updates to address the **Ping** of Death problem. In addition, third-party Mac OS products are available on the market, such as...

TEXT:

A few things have changed since I last wrote about the **Ping** of Death in December (see 12.09.96, Page 47), but Apple still has not documented or
...

...OS customers. (More than three months have passed since the problem was reported to the company.) The **Ping** of Death is an attack over a TCP/IP network that can crash Macs, as well as...

... seen a good analysis of their effects on the problem.

The Web site that originally documented the **Ping** of Death has moved to <http://prospect.epresence.com/ping/index.html>, and some additional documentation is available from the U.S. Department of Energy's Computer...

...updates/US/Un-ix/AIX/supported/.

MkLinux DR2 includes a **Ping** of Death fix in its Linux server 2.0.28. Apple has posted the descriptions and links...

...3.1, a friendly, capable network analyzer from The AG Group Inc. EtherPeek does not eliminate the **Ping** of Death, but it does offer a filter to help detect it, as well as a filter...

...helpful for some networks. Vicom Technology Ltd. recently issued a news release noting that the company's **Internet Gateway** product protects local-area networks from incoming **Ping** of Death attacks. This gateway connects a LAN by modem or ISDN to an Internet provider, functioning...

9/5,K/8 (Item 8 from file: 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

01996216 SUPPLIER NUMBER: 18788297 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Winning the class war in IP addressing: constructing a Subnet 10 yields piles of secure address space. (how to sets up subnetworks) (includes related article on Request for Comment documents that specify who can use Class A, B, C address domains) (PC Week Netweek) (Internet/Web/Online Service Information) (Tutorial)

Dutcher, William

PC Week, v13, n42, pN3(3)

Oct 21, 1996

DOCUMENT TYPE: Tutorial ISSN: 0740-1604 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 1446 LINE COUNT: 00113

ABSTRACT: Creating huge corporate intranets by subdividing a special Class A address space into smaller subnetworks is an effective option when a company cannot get a Class A Internet address on its own. A set of subnets protects corporate information assets on the intranet side while providing flexible Internet access and addressing security and management issues. It allows managers to use as much address space as needed, build protected intranets and create large-scale templates for comprehensive sets of services. Every host, router or workstation using its special addresses must be kept hidden from the Internet behind a proxy host or firewall. A proxy acts as an intelligent relay, translating Subnet 10 addresses into those the Internet recognizes. The manager first must align all networks and hosts behind a single point that will act as the **Internet gateway**. A Subnet 10 design consists of an inner network, a set of proxy hosts and the outer network using the public address space.

SPECIAL FEATURES: illustration; chart

DESCRIPTORS: Internet/Web Technology Application; Intranet

PRODUCT/INDUSTRY NAMES: 4811500 (Specialized Telecom Services)

SIC CODES: 4822 Telegraph & other communications

FILE SEGMENT: CD File 275

...ABSTRACT: manager first must align all networks and hosts behind a single point that will act as the **Internet gateway**. A Subnet 10 design consists of an inner network, a set of proxy hosts and the outer...

... because it's the only proxy the Web browser knows how to reach); utility proxies, such as **Ping**, Traceroute and TCPdump, which also may be placed on the FTP and Telnet proxy servers instead of...

9/5,K/9 (Item 9 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01996213 SUPPLIER NUMBER: 18788294 (USE FORMAT 7 OR 9 FOR FULL TEXT)
**WebRamp for small LANs makes Net access easy. (Trancell Systems Inc's
WebRamp Internet gateway device) (PC Week Netweek) (Hardware
Review) (Evaluation)**
Bohman, Julie
PC Week, v13, n42, pN1(3)
Oct 21, 1996
DOCUMENT TYPE: Evaluation ISSN: 0740-1604 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1010 LINE COUNT: 00084

ABSTRACT: Trancell Systems Inc's WebRamp is an inexpensive and effective tool for connecting remote NetWare sites to the Internet or a corporate backbone, but cannot handle IPX routing, making it less useful for large enterprise networks. It also duplicates the IPX gateway built into NetWare 4.11. The software eliminates the need for TCP/IP stacks at the remote site, simplifying configuration. It sells for \$1,495 and consists of a hardware gateway device and special software that supports IP, IPX, PPP and Multilink PPP protocols. ISDN users can aggregate the two B channels into a single 128-Kbps channel. Tests show that the WebRamp's performance is impressive. Linking 20 clients to different Internet sites simultaneously has little effect on access time and can be done from a single user account. The WebRamp is very easy to set up and use, although its event logging is not sophisticated and the clients cannot coexist with operating system TCP/IP stacks.

SPECIAL FEATURES: illustration; table
COMPANY NAMES: Trancell Systems Inc.--Products
DESCRIPTORS: Communications Server; Hardware Single Product Review
PRODUCT/INDUSTRY NAMES: 3661254 (Data Message Switching Eqp)
SIC CODES: 3661 Telephone and telegraph apparatus
TRADE NAMES: Trancell Systems WebRamp (Communications server)--Evaluation
FILE SEGMENT: CD File 275

**WebRamp for small LANs makes Net access easy. (Trancell Systems Inc's
WebRamp Internet gateway device) (PC Week Netweek) (Hardware
Review) (Evaluation)**

... filter sets with it.

For instance, we created customized filter sets to allow only specific outsiders to ping WebRamp or Telnet to it, then changed the parameters to disallow it completely.

Rolling along with logs...

9/5,K/10 (Item 10 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01989497 SUPPLIER NUMBER: 18693169 (USE FORMAT 7 OR 9 FOR FULL TEXT)
**In the line of fire. (firewall technology) (includes related article on
breaking language barriers) (Internet/Web/Online Service
Information) (Cover Story)**
Karve, Anita
LAN Magazine, v11, n11, p62(5)
Oct, 1996
DOCUMENT TYPE: Cover Story ISSN: 1069-5621 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3785 LINE COUNT: 00310

ABSTRACT: Firewalls are hardware devices or software programs that prevent Internet intrusion by accepting only information from trusted sources. The three key features of a firewall are a single point through which all

traffic must pass, a mechanism for logging traffic and software to prevent break-ins. Many router vendors now incorporate firewall code into their devices, leveraging the access lists all routers contain. Packet filters evaluate data based on IP information contained in packet headers. Dynamic packet filtering is an enhanced version of packet filtering that examines the address trying to gain access and pings the user to confirm it, preventing IP spoof attacks that have compromised some packet-filtered networks. Application gateways offer tighter security by examining packets at the application level and frequently use 'proxy' applications to create separate sessions. Another option is a virtual private network, which establishes a connection between two firewalls and encrypts data in transit.

SPECIAL FEATURES: illustration; chart; graph
DESCRIPTORS: Network Security Software; Internet/Web Technology; Data Security Issue; System Selection; Software Selection
FILE SEGMENT: CD File 275

... stand at a networks front entrance and verify that every packet coming in and out of the **Internet gateway** is authorized to do so. Firewalls control network traffic at both the Internet and intranet levels, and...confirm the address. Obviously, if an outside intruder is using a company's internal IP address, the **ping** will not go to the proper location and the session will not continue. Several products, including Seattle...

9/5,K/11 (Item 11 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01982271 SUPPLIER NUMBER: 18626988 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Drag-and-drop networking with Internet access.(Artisoft's LANtastic 7) (Product Announcement) (Brief Article)
Kerridge, Suzanna
PC User, n286, p14(1)
June 26, 1996
DOCUMENT TYPE: Product Announcement Brief Article ISSN: 0263-5720
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 258 LINE COUNT: 00023

COMPANY NAMES: Artisoft Inc.--Product introduction
DESCRIPTORS: Software Product Introduction; Network Operating System
SIC CODES: 7372 Prepackaged software
TICKER SYMBOLS: ASFT
TRADE NAMES: LANtastic 7.0 (Network operating system)--Product introduction
FILE SEGMENT: CD File 275

... rather than just sharing files, printers and CD-ROMs. Connection to TCP/IP, PPP, Telnet, FTP and **PING** provide access to the WAN, enabling users to access other network resources.

Features include Netscape's Navigator...

...a dedicated line for each user or workgroup.
The TCP/IP stack and a Winsock gateway, LANtastic **Internet Gateway**, enables users to share Internet access without the need for dedicated lines for each user.
It supports...

9/5,K/12 (Item 12 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01934315 SUPPLIER NUMBER: 17632618 (USE FORMAT 7 OR 9 FOR FULL TEXT)
1995 editorial index.(includes executive summary) (Software

Review) (Evaluation)

Stoltz, Kevin

LAN Magazine, v10, n13, p163(9)

Dec, 1995

DOCUMENT TYPE: Evaluation ISSN: 1069-5621

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 5728 LINE COUNT: 00461

ABSTRACT: Artisoft Inc's LANTastic Power Suite includes an integrated suite of applications designed to increase the productivity of any office. The applications include Lotus cc:Mail, Cheyenne Software's BitShare for network modem sharing, BitWare for faxing and communications, Netcom's NetCruiser for Internet access and the network version of Lotus Organizer for personal information management (PIM) and group scheduling. The applications are reasonably well integrated and the suite includes a friendly installation program. The documentation is excellent and Artisoft provides good telephone support. All of the applications are easy to use, although advanced features may require a steeper learning curve. The LANTastic Power Suite ranges in price from \$199 for a single user to \$8,199 for 100 users.

SPECIAL FEATURES: illustration; other

COMPANY NAMES: Artisoft Inc.--Products

DESCRIPTORS: Network Operating System; Software Single Product Review

SIC CODES: 7372 Prepackaged software

TICKER SYMBOLS: ASFT

TRADE NAMES: LANTastic Power Suite (Network operating system)--Evaluation

FILE SEGMENT: CD File 275

... sharing, and Internet access with Lantastic 6.1 network software.
Kevin Stoltz December, page 155

The Big **Ping** All TCP/IP software packages are not alike. We chose 13 industry offerings and put them through...March, page 142

Surfing in Safe Waters Firefox leverages its TCP/IP gateway expertise to concoct an **Internet gateway** with security. Gregory Wolf June, page 153

There's a New Office Manager Microsoft's new network...

9/5,K/13 (Item 13 from file: 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

01890677 SUPPLIER NUMBER: 17488771 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Internetwork 1995 TCP/IP software directory. (Internetwork

supplement) (includes company index) (Buyers Guide)

INTERNETWORK, v6, n8, pA1(20)

August, 1995

DOCUMENT TYPE: Buyers Guide

LANGUAGE: English

RECORD TYPE:

Fulltext; Abstract

WORD COUNT: 14920 LINE COUNT: 01298

ABSTRACT: The TCP/IP Software Directory provides a comprehensive listing of software products available for TCP/IP network applications. The directory is an alphabetical company listing of software products that apply to the TCP/IP industry with a description of each package. Each product is identified by one of ten colour coded categories of software. The directory also provides an alphabetical company index divided by software category.

DESCRIPTORS: Software Buyers' Guide; TCP/IP

FILE SEGMENT: CD File 275

... Integrated TCP/IP stack and applications include: FTP client-server, LPR/LPD print capabilities, Scripting, Finger Whois, **PING**, SNMP agent, TFTP client-server and BOOTP server.

Axis Communications 4 Constitution Way Woburn, Mass. 01801 (800...

Berkeley Software Design 5075 Tech Center Dr. #110 Colorado Springs, Colo.
80919 (719) 593-9445

* The BSDI **Internet Gateway**

The BSDI **Internet Gateway** server allows for connection to an Internet Service Provider via TCP/IP. It exploits a 386, 486...

...0

The BSDI Internet Server Version 2.0 makes it easy to set up and configure an **Internet gateway** and World Wide Web home page for PC platforms. It includes bulletproof networking (TCP/IP, SLIP and...Canada M5E 1J9 (416) 368-7157

* The BorderWare Firewall Server

The BorderWare Firewall Server is a complete **Internet gateway** and security system in one. It prevents access by unauthorized users to a trusted internal network while...and OS/2 text TCP/IP applications.

* WinView For Networks

WinView for Networks acts as a Windows **Internet gateway** for multiple users. End users can connect to WinView from the LAN, or remotely through an asynchronous...

...ability to run Windows-based Internet tools like Mosaic to browse the World Wide Web. As an **Internet gateway**, WinView allows multiple users to share a single IP address. It gives users high-speed access to...mail, Gopher, TN3270, Transparent Network Printing, LPR, LPD, SNMP Agent, TFTP, BOOTP, Finger, Whois, Network Monitor, and **PING**. The TCP/IP Tools are Winsock-compliant, so they can be run over any Winsock-compliant stack... IBM's LAN Support Program. It also supports Windows through a GUI that runs Telnet, FTP and **PING** programs under a Windows environment.

Eicon Technology

2196 32nd Ave.

Lachine, Quebec, Canada H8J 3H7

(514) 631...suspicious. NetSeer Reports is a reporting capability that develops statistics based upon every packet that crosses the **Internet gateway**.

* NetSeer Lite

NetSeer Lite is a shrink-wrapped version of NetSeer.

Teubner & Associates 7th and Main PO...95. Other applications in the suite include an NFS client, an FTP client and server, LPD/LPR, **PING**, and SNMP MIB II agent with private MIB, Enhanced Mosaic, WinVCN and Pronto/IP Network diagnostic and...

9/5,K/14 (Item 14 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rts. reserv.

01863819 SUPPLIER NUMBER: 17449934 (USE FORMAT 7 OR 9 FOR FULL TEXT)

International callback. (includes related articles on the International callback book, procedures for looking for the service and selling or buying callback equipment)

Jainschigg, John

Teleconnect, p144(7)

Sep, 1995

ISSN: 0740-9354

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 2933

LINE COUNT: 00240

ABSTRACT: International callback is evolving rapidly due to price fluctuations, less restrictive foreign governmental providers and intelligent hardware. International callback is the practice of using US based providers to call a foreign customer who wants to place a call either locally or internationally. The practice takes advantage of the pricing disparity between competing US telephone companies and the rigidly regulated, government run foreign companies. However, foreign markets, particularly Europe, are opening competition for their telephone service providers, indicating the market may soon disappear. Other foreign markets are still open but harder to reach for small international callback providers. Ultimately, the international callback market may evolve to resemble the currency market. Those that will survive will provide users

with a highly developed infrastructure able to make real-world processing in a highly abstract manner.

DESCRIPTORS: International Communications; Industry Trend; Market Trend/Market Analysis
SIC CODES: 3661 Telephone and telegraph apparatus
FILE SEGMENT: CD File 275

... final (nearby) destination. "Local" callback? Why not?
* Several of the largest international service providers are now offering **Internet gateway** services on a local basis to callback customers. Most say they expect Internet access to become a...

...and create room for multiple alternative carriers.

Third, new methods for signaling (e.g., a realtime Internet "**ping**") will eliminate or reduce the "code calling" controversy (Is it really ethical to use a telco network...

9/5,K/15 (Item 15 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01853449 SUPPLIER NUMBER: 17507759 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Enterprise networks. (LAN Buyers Guide Issue) (Buyers Guide)
LAN Magazine, v10, n10, p145(46)
Oct 15, 1995
DOCUMENT TYPE: Buyers Guide ISSN: 1069-5621 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 45699 LINE COUNT: 03560

ABSTRACT: Equipment for enterprise networks is described in the following categories: computer telephony equipment, DSUs/CSUs, e-mail gateways and directories, IBM connectivity, Internet access software/hardware, minicomputer gateways, network operating systems, NOS-to-Unix interoperability/dual stacks, remote access servers, routers, switches/bridges, TCP/IP software, and WAN connectivity. The entry for each product includes the name, a brief description, and the price.

DESCRIPTORS: Hardware Buyers' Guide; Software Buyers' Guide; Network Software; Telecommunications Equipment; DSU/CSU; Bridge/Router; Packet Switch; Internet Access Software; Gateway Device; Network Operating System; Enterprise Network; Remote Access Software; TCP/IP; WAN
SIC CODES: 3661 Telephone and telegraph apparatus; 7372 Prepackaged software
FILE SEGMENT: CD File 275

... frame-based SMDS, and frame-based ATM interfaces are available. They include SNMP Traps agent, ASCII, telnet, **ping**, proprietary, and remote management. Dual-Port costs \$2,495, Single-Port costs \$1,645 to \$1,695...Manager, LAN Server, NetBIOS, NetWare 3.x and 4.x, and VINES. It costs \$1,295.

NETSOURCE

INTERNET GATEWAY SERVICE

NetSource **Internet Gateway** Service is a gateway between cc:Mail and SMTP e-mail systems. Reporting features include usage. It...keyboard mapping; SMTP, MIME, and NFS protocols; and SNMP management services. News, archie, veronica, gopher, WWW, finger, **ping**, whois, and BOOTP application services are available. It uses IP and TCP transport protocols and requires 4MB...telnet, VT100, and VT220. SMTP, POP2, POP3, and MIME protocols and News, archie, veronica, gopher, WWW, whois, **ping**, and finger application services are available. It uses IP, TCP, and UDP transport protocols and costs \$125...

9/5,K/16 (Item 16 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rights reserved.

01797947 SUPPLIER NUMBER: 17087416 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Hassle-free Internet. (includes related articles on Editors' Choice, glossary) (overview of four evaluations of NetWare Internet gateways) (individual evaluation records searchable under "Hassle-Free Internet") (Software Review) (Evaluation)

Garris, John

PC Magazine, v14, n13, pN1(6)

July, 1995

DOCUMENT TYPE: Evaluation ISSN: 0888-8507

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 1575 LINE COUNT: 00126

ABSTRACT: Four gateway products for connecting NetWare LANs to the Internet are reviewed. All provide an interface between the TCP/IP protocol suite and NetWare's IPX protocol. Gateways offer simple, centralized configuration via a single TCP/IP address for all network users; client-based packages require the administrator to assign separate addresses for every node. Some products run as NetWare Loadable Modules (NLM), while others are standalone applications or hardware/software solutions. Novix for Internet, an NLM from Firefox Inc, is rated an Editors' Choice because it is easy to install, runs smoothly and offers built-in scalability via its ability to service multiple IP addresses. Performance Technology's hardware/software Instant Internet earns an honorable mention.

COMPANY NAMES: Firefox Inc.--Products; Performance Technology Inc.--Products

DESCRIPTORS: Network software; Software Multiproduct Review

SIC CODES: 7372 Prepackaged software; 3577 Computer peripheral equipment, not elsewhere classified

TRADE NAMES: Performance Technology Instant Internet (Internet networking device)--Evaluation; Novix for Internet (Protocol gateway software)--Evaluation

FILE SEGMENT: CD File 275

... article we look at one alternative that can make things a lot simpler: using an IP/IPX **Internet gateway**. With any of the products reviewed here, your users can run all their favorite Internet applications over...portion of the TCP/IP standard that routes messages from one Internet node to another.

IP/IPX Internet Gateway A software or hardware package that translates IP packets into IPX packets and vice versa. It allows...individual access to the Internet.

Leased Line A telephone line rented for dedicated access to the Internet.

PING Packet Internet Groper; a tool that sends packets of information to a computer on a network. It can determine whether...

9/5,K/17 (Item 17 from file: 275)

DIALOG(R) File 275:Gale Group Computer DB(TM)

(c) 2003 The Gale Group. All rights reserved.

01797303 SUPPLIER NUMBER: 17017233 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Rumba stacks up with TCP/IP. (Wall Data Inc adds Windows VxD TCP/IP stack and applications to Rumba Office 2.0) (Product Announcement)

MIDRANGE Systems, v8, n9, p15(1)

May 12, 1995

DOCUMENT TYPE: Product Announcement ISSN: 1041-8237

LANGUAGE:

ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 412 LINE COUNT: 00035

ABSTRACT: Wall Data Inc's Rumba Office 2.0 terminal emulation software includes a Windows VxD TCP/IP stack and applications. Version 2.0 also includes improved AS/400 connectivity, a new user interface and an optional

Internet gateway . Users will be able to employ the 32-bit Winsock-compliant TCP/IP stack to connect to host systems. The TCP/IP applications include ftp, LPD and LPR, SLIP, **Ping** and WinSNMP. Wall Data added the TCP/IP stack because almost all of its larger customers are moving to TCP/IP. The SNA Client stack is the same one employed by Microsoft's SNA Server. New connectivity support includes Rumba for Database Access, Crystal Reports for Rumba and shared-folder support. Windows 3D buttons provide point-and-click interaction between applications. A single user license for Rumba Office 2.0 is \$500. Rumba for the Internet is available for another \$100.

COMPANY NAMES: Wall Data Inc.--Product introduction
DESCRIPTORS: Terminal Emulation Software; Networking Software Product
Introduction; TCP/IP
SIC CODES: 7372 Prepackaged software
TRADE NAMES: Rumba Office 2.0 (Terminal emulation software)--Product
introduction
FILE SEGMENT: CD File 275

...ABSTRACT: applications. Version 2.0 also includes improved AS/400 connectivity, a new user interface and an optional **Internet gateway** . Users will be able to employ the 32-bit Winsock-compliant TCP/IP stack to connect to host systems. The TCP/IP applications include ftp, LPD and LPR, SLIP, **Ping** and WinSNMP. Wall Data added the TCP/IP stack because almost all of its larger customers are...

TEXT:

...systems through TCP/IP or Telnet access. TCP/IP applications such as ftp, LPD and LPR, SLIP, **Ping** , and WinSNMP provided.

9/5,K/18 (Item 18 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01782102 SUPPLIER NUMBER: 16824265 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Playing with fire. (network security)
Baldasserini, Mario
Computer Shopper, v15, n6, p606(3)
June, 1995
ISSN: 0886-0556 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2240 LINE COUNT: 00174

ABSTRACT: Many third-party vendors are producing products they bill as firewalls for network security against outside intrusion, but users should be wary of their capabilities. Firewalls monitor and control all data traffic in both directions. Engineers construct firewalls in segments, creating LAN domains. If a network user wants access to information outside their domain, they must process the request with a network administrator or the firewall. Routers can block rejected users so they cannot pass out of a domain. The most common Internet firewall is typically composed of one or more routers. While Internet firewalls are useful in many instances, they are not proper firewalls because they are router solutions, which are two-way communication devices.

SPECIAL FEATURES: illustration; chart
DESCRIPTORS: Systems/Data Security Software; Network Security Software; Technology Information; Technology Overview
SIC CODES: 7372 Prepackaged software
FILE SEGMENT: CD File 275

... internal PC for such a purpose. You should also make sure no one can Telnet, finger, or **ping** your routers by closing certain access ports on those products. Exactly which ports you need to close...

...review on p. 449), there's a lengthy list of potential security loopholes in the typical network **Internet gateway** . See how many of them

your potential product addresses. Another good network security text is "Network Security..."

9/5,K/19 (Item 19 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01721266 SUPPLIER NUMBER: 16275435 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Bonding with the Internet. (Hill Associates Inc implements E-mail software and an Internet gateway)
Kessler, Gary; Monaghan, Carol
LAN Magazine, v9, n13, p113(5)
Dec, 1994
ISSN: 0898-0012 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2934 LINE COUNT: 00228

ABSTRACT: Hill Associates Inc (HAI) recently took on the task of selecting and implementing an E-mail package and an **Internet gateway**. HAI decided on Lotus' cc:Mail as its E-mail system after examining the package's features and finding no major compatibility problems. Next, HAI began its search for an Internet service provider. HAI's first step was to examine the reasons behind its decision to access the Internet. HAI wanted to gain access to enhance communications with its customers, tap into the Internet's resources and to become a part of the Internet community. HAI believes it is important to examine a number of provider alternatives and consider the associated costs, access type, access speed, management options and technical support quality. HAI decided to go with Netcom Online Communication Services Inc as its Internet access provider. HAI also selected Lotus cc:Mail Link to SMTP gateway as its Internet E-mail, and FTP Software's PC/TCP to provide support for its TCP/IP-based utilities.

SPECIAL FEATURES: illustration; chart; table
COMPANY NAMES: Hill Associates Inc.--Communication systems; NETCOM
On-Line Communication Services Inc.--Services
DESCRIPTORS: E-Mail; Internet; Implementation; Case Study
SIC CODES: 7372 Prepackaged software
TRADE NAMES: Internet (Computer network)--Usage; cc:Mail (E-mail)--Usage
FILE SEGMENT: CD File 275

Bonding with the Internet. (Hill Associates Inc implements E-mail software and an Internet gateway)

...ABSTRACT: Inc (HAI) recently took on the task of selecting and implementing an E-mail package and an **Internet gateway**. HAI decided on Lotus' cc:Mail as its E-mail system after examining the package's features

... began investigating Internet access as well.
Our experiences with choosing and setting up e-mail and an **Internet gateway** over the past year or so should prove instructive to other organizations that want to improve their...It supported all of the TCP/IP-based utilities that we wanted, including ftp, telnet, nslookup, nickname, **ping**, finger, and traceroute, and it also supported both DOS and Windows, a mandatory requirement for us. The...

9/5,K/20 (Item 20 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01678598 SUPPLIER NUMBER: 15097013 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Travels on the super information b-road. (an introduction to Internet) (Tutorial)
Bagshaw, Eric
Which Computer?, v17, n3, p52(2)
March, 1994
DOCUMENT TYPE: Tutorial ISSN: 0140-3435 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1399 LINE COUNT: 00110

ABSTRACT: The global Internet is a loose worldwide internetwork of two million computers that provide useful communications and information resource tools that complement businesses' computer networks and electronic mail (E-mail) systems. Over 15 million users have access to the Internet through a variety of means, including academic computer links, commercial Internet service providers and bulletin board systems. All that is required is a computer, modem, communications software with terminal emulation capabilities, and an account with an Internet service provider. The Internet host computers communicate with each other through the use of the TCP/IP communications protocol. Facilities on the Internet include electronic mail, numerous data bases and files for access and downloading, search tools such as Gopher, library catalogs, conferences and discussion groups. Most of these resources are free, though Internet service provider accounts may have registration, membership and/or time fees. Two Internet reference books are very briefly reviewed.

DESCRIPTORS: Internet; Tutorial; Beginners
FILE SEGMENT: CD File 275

... you can use a query database system called Archie that stores the addresses of anonymous FTP servers.

Ping and **Trace** are two very commands in order to check the destination and data routing. **Ping**, and the node name, simply returns '<node-name> is Alive' if the computer is running and is...so on; but free services have some access costs. You will usually have to pay for the **Internet gateway**, and Telecoms companies also like you to pay your phone bill.

Even so, it need not be...

9/5,K/21 (Item 21 from file: 275)
DIALOG(R) File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01514291 SUPPLIER NUMBER: 12125306 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Unearthing the hidden network. (network security) (includes related article on hidden logical networks)

Powell, Dave
Networking Management, v10, n5, p22(6)
April, 1992

ISSN: 1052-049X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3211 LINE COUNT: 00259

ABSTRACT: Networks that are not properly inventoried and documented can pose significant security risks because those who are supposed to be responsible for them do not know what equipment and software is installed where. Retaining control over sensitive information can be difficult when network extensions are hidden from managers. Undocumented modems can be used to establish data links with outside computers and are difficult to control. One way to manage modem links is to configure PBX systems to restrict calls; some modems also offer automatic call-back security. Security audits often uncover PBX problems such as dial or digital cross-connections that lead to hidden network extensions. Enterprise LANs can crop up without the manager's knowledge; some are totally isolated, but may enter known networks via modems. Unattended workstations left active allow anyone passing by to access a hidden network. Techniques for unearthing security holes in networks include configuring bridges, routers, gateways, switches and other equipment to provide audit trails; installing management systems and analyzers that automatically 'discover' the network environment around them; and performing rigorous self-auditing.

SPECIAL FEATURES: illustration; photograph; table
DESCRIPTORS: Network Management; Data Security; User Need; Guidelines; System Selection; LAN

... good. As it turned out, they had simply left the IP Routing protocol turned on in an **Internet gateway**, which made them an open extension of our client's internal network. We called them and let...

...any device that speaks. Others actively broadcast commands (such as scans for SNMP MIB routing tables or **Ping** sweeps to locate IP devices). Both types of systems can detect devices communicating into the known network...

9/5,K/22 (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rts. reserv.

01162695 CMP ACCESSION NUMBER: WIN19980601S0111
100 Best Shareware & Freeware - We combed the Web for 100 of the very best shareware and freeware applications. Here they are.
Windows Magazine Staff
WINDOWS MAGAZINE, 1998, n 906, PG186
PUBLICATION DATE: 980601
JOURNAL CODE: WIN LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Cover Story
WORD COUNT: 7562
TEXT:

Our shareware super guide is back for the second year, and it's even better than before. This time, we've added three new categories- file management, NT utilities and security-and beefed up coverage of Windows CE.

COMPANY NAMES (DIALOG GENERATED): A CE ; Accounts Receivable ; Animation Shop ; ASCII ; EMF ; File Gold ; File Management ; Free Memory Tool ; FF Billing ; Handheld PCs ; HTP ; Invoice Register ; ICO ; ISP ; Kodak ; Learning ; Microsoft ; My Computer ; Outlook Express ; PaneKiller 1 1 Drilling ; Payment Register ; PowerDesk Utilities 98 PowerDesk Utilities ; PE Analyzer 1 5 0 2 The Properties ; Scroll Lock ; Senior Technology ; Special Edition Using Office ; WMF ; Zip

... is convenient if you deal with several connections with similar settings.

ProtoFax Server 3.0 - This multipurpose **Internet gateway** is worth calling home about. It provides users with a centralized location for getting in touch with...

...of a "ring-no-answer" or busy signal, and automatically disconnects after inactive periods. Its built-in **Ping** utility lets you diagnose

9/5,K/23 (Item 2 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rts. reserv.

01100784 CMP ACCESSION NUMBER: NWC19960815S0024
FTP Raises The Stakes In The TCP/IP Game (Internet)
Anthony Frey
NETWORK COMPUTING, 1996, n 712, PG58
PUBLICATION DATE: 960815
JOURNAL CODE: NWC LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Sneak Previews
WORD COUNT: 828
TEXT:

Microsoft's push to make the TCP/IP protocol an integral part of the Windows OS has left many TCP/IP stack vendors trying to change the rules

of the game. These vendors realize users are looking for a way to justify the additional cost. FTP Software's new rules are aimed at the large-scale enterprise market. The beta copy of its OnNet32 version 2.0 TCP/IP stack for Windows95 and Windows NT shows that FTP has not only changed the rules but it has raised the stakes.

... simultaneous access to a dial-up Internet account and your LAN, without having to have an enterprise **Internet gateway**.

A Full House If you show this package to your users, a likely reaction will be, "What..."

...administrator there's an integrated query tool for Finger, Domain Name Service, Network Information Service, whois, a **ping** and traceroute tool, a local IP stack packet analyzer, SNMP MIB-II server agent, DHCP client and...

9/5,K/24 (Item 3 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rts. reserv.

01089742 CMP ACCESSION NUMBER: CWK19960506S0023

Your gateway To The World - Frontier's CyberJunction serves NetWare users by connecting them to the 'Net

Wayne Rash, Jr
COMMUNICATIONSWEEK, 1996, n 609, PG12
PUBLICATION DATE: 960506
JOURNAL CODE: CWK LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Product Testing - Hands On
WORD COUNT: 1118
TEXT:

For companies with Novell NetWare LANs, the Internet hype has been frustrating. Despite the fact many companies had networks that performed well and met their business objectives perfectly, they still couldn't get on the Internet. Or rather, they could-if they had the time and staff hours available to add TCP/IP client software to every workstation, and then add an **Internet gateway** to their corporate network.

TEXT:

... and staff hours available to add TCP/IP client software to every workstation, and then add an **Internet gateway** to their corporate network.

... include everything from a Web browser-using Frontier's well-designed combination browser and organizer-to a **Ping** application. Frontier also includes a special version of a Windows Sockets client designed to provide communications over...

9/5,K/25 (Item 4 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rts. reserv.

01017616 CMP ACCESSION NUMBER: CWK19940704S0709

AirNote Worth Noting For Pager-Based Mail

DAVID STROM
COMMUNICATIONSWEEK, 1994, n 512, 1
PUBLICATION DATE: 940704
JOURNAL CODE: CWK LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: News
WORD COUNT: 1388
TEXT:

Notable Technologies Inc.'s AirNote paging service is the first package I've seen that gives you everything you need to integrate your pager with your computer network-all in a single box.

... One curious situation occurred the first time I forwarded my MCI Mail to my pager. Since the **Internet gateway** sends an acknowledgment for every page, a single message sent to my MCI Mail box resulted in a **Ping -Pong** game of cascading pages as the message receipt was then forwarded back to my pager. Later...

...it lacking. Oakland, Calif.-based Notable has learned from Motorola's mistakes:

* There is a simple, fast **Internet gateway** for E-mail users. Embarc was slow and expensive to use, since it was based on cumbersome...

...some connectivity to the Internet.

You can send up to 120 characters to your pager through the **Internet gateway**, and most messages are delivered within a minute or two. At one point, however, when the gateway...

...There are lots of additional costs and surcharges for other services, such as messages sent via the **Internet gateway**, which can cost up to \$5 a month extra.

AirNote prices its messages in 40-character blocks...

9/5,K/26 (Item 1 from file: 696)
DIALOG(R)File 696:DIALOG Telecom. Newsletters
(c) 2003 The Dialog Corp. All rts. reserv.

00653305

Software

ISP BUSINESS NEWS

February 8, 1999 VOL: 5 ISSUE: 6 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: PHILLIPS BUSINESS INFORMATION

LANGUAGE: ENGLISH WORD COUNT: 442 RECORD TYPE: FULLTEXT

Software.com (www.software.com) InterMail Kx messaging software

Status: Upgrade Cost: \$5 to \$8 per mailbox license C

ontact: Josh Sobeck Phone:

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

COMPANY NAME(S): DMS ; Infinite Technologies ; Modern Software Publishing Inc ; NetGuard Control Center ; Nortel Networks ; Response Networks Inc ; ResponseNet ; ResponseWeb ; SuperNode Data

TEXT:

...1097

Available: Now

Target: Enterprise Customers

Infinite Voice Professional Edition is a client/server e-mail system, **Internet gateway** and e-mail voice attendant, designed for enterprise customers. The product includes an IMAP4/POP3 E-mail...

...7770

Available: Now

Target: Enterprise Customers

ResponseNet helps network managers who need an off-the-shelf distributed **ping** manager that also tests application servers. ResponseWeb targets network managers supporting corporate intranets that run business-critical...

Set	Items	Description
S1	64	(VICOMSOFT OR VICOM())SOFT)/CO
S2	55	S1 NOT PY>2000
S3	44	S2 NOT PD>20000927
S4	21	RD (unique items)
File	9:Business & Industry(R)	Jul/1994-2003/Dec 12
	(c) 2003 Resp. DB Svcs.	
File	15:ABI/Inform(R)	1971-2003/Dec 13
	(c) 2003 ProQuest Info&Learning	
File	16:Gale Group PROMT(R)	1990-2003/Dec 12
	(c) 2003 The Gale Group	
File	18:Gale Group F&S Index(R)	1988-2003/Dec 12
	(c) 2003 The Gale Group	
File	47:Gale Group Magazine DB(TM)	1959-2003/Dec 12
	(c) 2003 The Gale group	
File	148:Gale Group Trade & Industry DB	1976-2003/Dec 15
	(c)2003 The Gale Group	
File	275:Gale Group Computer DB(TM)	1983-2003/Dec 12
	(c) 2003 The Gale Group	
File	484:Periodical Abs Plustext	1986-2003/Nov W5
	(c) 2003 ProQuest	
File	553:Wilson Bus. Abs. FullText	1982-2003/Nov
	(c) 2003 The HW Wilson Co	
File	613:PR Newswire	1999-2003/Dec 15
	(c) 2003 PR Newswire Association Inc	
File	636:Gale Group Newsletter DB(TM)	1987-2003/Dec 12
	(c) 2003 The Gale Group	
File	640:San Francisco Chronicle	1988-2003/Dec 15
	(c) 2003 Chronicle Publ. Co.	
File	647:CMP Computer Fulltext	1988-2003/Dec W1
	(c) 2003 CMP Media, LLC	
File	649:Gale Group Newswire ASAP(TM)	2003/Dec 12
	(c) 2003 The Gale Group	
File	674:Computer News Fulltext	1989-2003/Dec W1
	(c) 2003 IDG Communications	
File	696:DIALOG Telecom. Newsletters	1995-2003/Dec 14
	(c) 2003 The Dialog Corp.	

4/5,K/1 (Item 1 from file: 9)
DIALOG(R)File 9:Business & Industry(R)
(c) 2003 Resp. DB Svcs. All rts. reserv.

2513515 Supplier Number: 02513515 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Streaming Through Firewalls
(Vicomsoft now supports QuickTime 4.0 streaming media in SoftRouter, its network address translation software router for Macintosh and Windows)
Information Week, p 131
July 12, 1999
DOCUMENT TYPE: Journal; News Brief ISSN: 8750-6874 (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 113

TEXT:

Vicomsoft now supports QuickTime 4.0 streaming media in SoftRouter, its network address translation software router for Macintosh and Windows. Previously, LAN users who connected to the Internet through firewalls or NAT routers often experienced difficulties receiving streaming media.

SoftRouter now lets multiple LAN users access video feeds through a NAT router as they would any Web site. SoftRouter also incorporates a transparent Web Caching Server, a powerful dynamic host configuration protocol server supporting up to 1,000 clients, domain name service, a caching server for speeding Internet host location, and a remote-access server including security allowing incoming connections to a LAN and firewall protection for LAN users. Price: Starts at \$155.

July 12, 1999

Copyright 1999 CMP Publications, Inc.

COMPANY NAMES: **VICOMSOFT**
INDUSTRY NAMES: Network hardware and software; Telecom equipment; Telecommunications
PRODUCT NAMES: Routers (366156)
CONCEPT TERMS: All product and service information; Product introduction
GEOGRAPHIC NAMES: North America (NOAX); United States (USA)

COMPANY NAMES: **VICOMSOFT**

4/5,K/2 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

07774502 Supplier Number: 65009544 (USE FORMAT 7 FOR FULLTEXT)
Seattle Lab, Vicomsoft Merge U.S. & Canadian Sales Operations.
Business Wire, p0401
Sept 6, 2000
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 488
PUBLISHER NAME: Business Wire
COMPANY NAMES: BVRP Software; **Vicomsoft**
PRODUCT NAMES: *7372000 (Computer Software)
INDUSTRY NAMES: BUS (Business, General); BUSN (Any type of business)
SIC CODES: 7372 (Prepackaged software)
NAICS CODES: 51121 (Software Publishers)
SPECIAL FEATURES: LOB; COMPANY

COMPANY NAMES: BVRP Software; **Vicomsoft**

4/5,K/3 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

07581763 Supplier Number: 63511338 (USE FORMAT 7 FOR FULLTEXT)

FRANCE'S BVRP PURCHASES AMERICAN SOFTWARE PUBLISHER VICOMSOFT.

Tech Europe, pNA

July 13, 2000

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 217

PUBLISHER NAME: Europe Information Service

COMPANY NAMES: BVRP Software; **Vicomsoft**

PRODUCT NAMES: *7372000 (Computer Software)

INDUSTRY NAMES: BUSN (Any type of business); ENG (Engineering and Manufacturing); INTL (Business, International)

SIC CODES: 7372 (Prepackaged software)

NAICS CODES: 51121 (Software Publishers)

SPECIAL FEATURES: (LOB; COMPANY

COMPANY NAMES: BVRP Software; **Vicomsoft**

4/5,K/4 (Item 3 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2003 The Gale Group. All rts. reserv.

07340843 Supplier Number: 62099334 (USE FORMAT 7 FOR FULLTEXT)

Network Services -- Vicomsoft Internet Gateway Enterprise Suite 6.6. (Brief Article) (Product Announcement)

Network Computing, p42

May 15, 2000

ISSN: 1046-4468

Language: English Record Type: Fulltext

Article Type: Brief Article; Product Announcement

Document Type: Magazine/Journal; Trade

Word Count: 133

PUBLISHER NAME: CMP Media, Inc.

COMPANY NAMES: **Vicomsoft**

EVENT NAMES: *336 (Product introduction)

GEOGRAPHIC NAMES: *1USA (United States)

PRODUCT NAMES: *7372611 (Network Management Software)

INDUSTRY NAMES: BUSN (Any type of business); CMPT (Computers and Office Automation)

SIC CODES: 7372 (Prepackaged software)

NAICS CODES: 51121 (Software Publishers)

TRADE NAMES: Vicomsoft Internet Gateway Enterprise Suite 6.6 (Network management software)

SPECIAL FEATURES: COMPANY

COMPANY NAMES: **Vicomsoft**

4/5,K/5 (Item 4 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2003 The Gale Group. All rts. reserv.

06408852 Supplier Number: 54868931 (USE FORMAT 7 FOR FULLTEXT)

New Internet Sharing Software With Parental Controls for Home Networks.

PR Newswire, p8313

June 14, 1999

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 554

PUBLISHER NAME: PR Newswire Association, Inc.

COMPANY NAMES: **Vicomsoft**

GEOGRAPHIC NAMES: *1USA (United States)

INDUSTRY NAMES: BUS (Business, General); BUSN (Any type of business)

SPECIAL FEATURES: COMPANY

COMPANY NAMES: Vicomsoft

4/5,K/6 (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

06246514 Supplier Number: 54841454 (USE FORMAT 7 FOR FULLTEXT)
**SoftRouter Plus Costs Less Than Hardware Routers.(network software from
Vicomsoft) (Brief Article) (Product Announcement)**
Network, pNA
Jan 1, 1999
ISSN: 1093-8001
Language: English Record Type: Fulltext
Article Type: Brief Article; Product Announcement
Document Type: Magazine/Journal; Trade
Word Count: 146
PUBLISHER NAME: Miller Freeman, Inc.
COMPANY NAMES: Vicomsoft
EVENT NAMES: *336 (Product introduction)
GEOGRAPHIC NAMES: *1USA (United States)
PRODUCT NAMES: *7372620 (Network Software)
INDUSTRY NAMES: BUSN (Any type of business); CMPT (Computers and Office
Automation)
NAICS CODES: 51121 (Software Publishers)
TRADE NAMES: SoftRouter Plus (Network software)
SPECIAL FEATURES: COMPANY
COMPANY NAMES: Vicomsoft

4/5,K/7 (Item 6 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

06028290 Supplier Number: 53456019 (USE FORMAT 7 FOR FULLTEXT)
**Internet connection sharing made simple.(Vicom product family) (Software
Review) (Evaluation)**
Whaley, Charles
Computing Canada, v24, n48, p27(1)
Dec 21, 1998
ISSN: 0319-0161
Language: English Record Type: Fulltext
Article Type: Evaluation
Document Type: Magazine/Journal; Trade
Word Count: 780
PUBLISHER NAME: Plesman Publications Ltd.
COMPANY NAMES: Vicomsoft Inc.
EVENT NAMES: *350 (Product standards, safety, & recalls)
GEOGRAPHIC NAMES: *1USA (United States)
PRODUCT NAMES: *7372620 (Network Software)
INDUSTRY NAMES: BUSN (Any type of business); CMPT (Computers and Office
Automation); INTL (Business, International)
NAICS CODES: 51121 (Software Publishers)
TRADE NAMES: SurfDoubler (Internet access software); SoftRouter Plus
(Internet access software); Vicom Technology Internet Gateway for the
Small Office (Internet access software)
SPECIAL FEATURES: COMPANY

COMPANY NAMES: Vicomsoft Inc.

4/5,K/8 (Item 1 from file: 18)
DIALOG(R)File 18:Gale Group F&S Index(R)
(c) 2003 The Gale Group. All rts. reserv.

04252997 Supplier Number: 65330707
Mac, Windows software developers merge.(Seattle Lab Inc. and Vicomsoft

Systems Inc.) (Brief Article)

The Business Journal, v18, n20, p24

Sept 15, 2000

ISSN: 1048-8812

Language: English Record Type: Citation

Article Type: Brief Article

Document Type: Magazine/Journal; Trade

COMMENTS: Vicomsoft Systems Inc.: Mac, Windows software developers
merge. (Seattle Lab Inc. and Vicomsoft Systems Inc.)

COMPANY NAMES: **Vicomsoft** Systems Inc.; Seattle Lab Inc.

EVENT NAMES: *150 (Acquisitions & mergers)

GEOGRAPHIC NAMES: *1USA (United States)

PRODUCT NAMES: *7372000 (Computer Software)

INDUSTRY NAMES: BUSN (Any type of business); REG (Business, Regional)

SIC CODES: 7372 (Prepackaged software)

NAICS CODES: 51121 (Software Publishers)

SPECIAL FEATURES: LOB; COMPANY

COMPANY NAMES: **Vicomsoft** Systems Inc.; Seattle Lab Inc.

4/5,K/9 (Item 2 from file: 18)

DIALOG(R)File 18:Gale Group F&S Index(R)

(c) 2003 The Gale Group. All rts. reserv.

03412638 Supplier Number: 55047629

FARALLON COMMUNICATIONS: Farallon launches unique Internet Sharing Kit.

M2 Presswire, pNA

July 1, 1999

Language: English Record Type: Citation

Document Type: Newswire; Trade

COMMENTS: Farallon Communications Inc.: FARALLON COMMUNICATIONS: Farallon
launches unique Internet Sharing Kit.

COMPANY NAMES: Farallon Communications Inc.; **Vicomsoft**

GEOGRAPHIC NAMES: *1USA (United States)

PRODUCT NAMES: *3573160 (Personal Digital Assistants); 3573200
(Computer Peripherals)

INDUSTRY NAMES: BUSN (Any type of business); INTL (Business,
International)

SIC CODES: 3571 (Electronic computers); 3577 (Computer peripheral
equipment, not elsewhere classified)

NAICS CODES: 334111 (Electronic Computer Manufacturing); 33411 (Computer
and Peripheral Equipment Manufacturing)

SPECIAL FEATURES: COMPANY

COMPANY NAMES: Farallon Communications Inc.; **Vicomsoft**

4/5,K/10 (Item 1 from file: 47)

DIALOG(R)File 47:Gale Group Magazine DB(TM)

(c) 2003 The Gale group. All rts. reserv.

05858036 SUPPLIER NUMBER: 63800100 (USE FORMAT 7 OR 9 FOR FULL TEXT)

FTP Client Pro 3.0. (Software Review) (Evaluation)

BECKMAN, MEL

Macworld, 17, 8, 56

August, 2000

DOCUMENT TYPE: Evaluation ISSN: 0741-8647 LANGUAGE: English

RECORD TYPE: Fulltext

WORD COUNT: 494 LINE COUNT: 00042

COMPANY NAMES: **Vicomsoft** --Products

DESCRIPTORS: Computer software industry--Products; File transfer
(Computers)--Computer programs

GEOGRAPHIC CODES/NAMES: 1USA United States

PRODUCT/INDUSTRY NAMES: 7372663 (File Transfer Software)

SIC CODES: 7372 Prepackaged software

NAICS CODES: 51121 Software Publishers
TRADE NAMES: FTP Client Pro 3.02 (File transfer software)--Evaluation
FILE SEGMENT: CD File 275

COMPANY NAMES: Vicomsoft --

4/5,K/11 (Item 2 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2003 The Gale group. All rts. reserv.

05773970 SUPPLIER NUMBER: 61602902 (USE FORMAT 7 OR 9 FOR FULL TEXT)
DHCP Server 6.5.(from Vicomsoft)
BECKMAN, MEL
Macworld, 17, 5, 50
May, 2000
ISSN: 0741-8647 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 653 LINE COUNT: 00055

COMPANY NAMES: Vicomsoft --Products
DESCRIPTORS: Network management software--Evaluation
PRODUCT/INDUSTRY NAMES: 7372611 (Network Management Software)
SIC CODES: 7372 Prepackaged software
NAICS CODES: 51121 Software Publishers
TRADE NAMES: Vicomsoft DHCP Server 6.5 (Network management software)--
Evaluation
FILE SEGMENT: CD File 275

COMPANY NAMES: Vicomsoft --

4/5,K/12 (Item 3 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2003 The Gale group. All rts. reserv.

05765865 SUPPLIER NUMBER: 61422709 (USE FORMAT 7 OR 9 FOR FULL TEXT)
SoftRouter Plus 6.0.(Software Review)(Evaluation)
BECKMAN, MEL
Macworld, 16, 9, 62
Sept, 1999
DOCUMENT TYPE: Evaluation ISSN: 0741-8647 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 447 LINE COUNT: 00040

COMPANY NAMES: Vicomsoft --Products
DESCRIPTORS: Network software--Evaluation
PRODUCT/INDUSTRY NAMES: 3661251 (Communications Servers); 3661257
(LAN/WAN Adapters); 7372620 (Network Software)
SIC CODES: 3661 Telephone and telegraph apparatus; 7372 Prepackaged
software
NAICS CODES: 33421 Telephone Apparatus Manufacturing; 51121 Software
Publishers
TRADE NAMES: SoftRouter Plus 6.0.1 (Network software)--Evaluation
FILE SEGMENT: CD File 275

COMPANY NAMES: Vicomsoft --

4/5,K/13 (Item 4 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2003 The Gale group. All rts. reserv.

05567224 SUPPLIER NUMBER: 61241465 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Internet-Sharing Software.(Software Review)(Evaluation)
BECKMAN, MEL
Macworld, 17, 1, 51
Jan, 2000

DOCUMENT TYPE: Evaluation ISSN: 0741-8647 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 504 LINE COUNT: 00047

COMPANY NAMES: **Vicomsoft** --Products; Sustainable Softworks--Products
DESCRIPTORS: Network software--Evaluation
PRODUCT/INDUSTRY NAMES: 7372624 (Resource Sharing Software); 7372620
(Network Software)
SIC CODES: 7372 Prepackaged software
NAICS CODES: 51121 Software Publishers
TRADE NAMES: Internet Gateway 6.5 (Resource sharing software)--Evaluation
; IPNetRouter 1.4.2 (Resource sharing software)--Evaluation
FILE SEGMENT: CD File 275

COMPANY NAMES: **Vicomsoft** --

4/5,K/14 (Item 1 from file: 484)
DIALOG(R)File 484:Periodical Abs Plustext
(c) 2003 ProQuest. All rts. reserv.

04425269 (USE FORMAT 7 OR 9 FOR FULLTEXT)

SoftRouter Plus 6.0

Beckman, Mel

MacWorld (IMCW), v16 n9, p62, p.01

Sep 1999

ISSN: 0741-8647 JOURNAL CODE: IMCW

DOCUMENT TYPE: Product Review-Favorable

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 431

ABSTRACT: Beckman reviews Vicomsoft's SoftRouter Plus 6.0.1 routing software.

Copyright MacWorld Communications Inc 1999

DESCRIPTORS: Software; Servers

PRODUCT/INDUSTRY NAMES: Vicomsoft SoftRouter Plus 6.0.1

SPECIAL FEATURES: Photograph

COMPANY INFORMATION:

Vicomsoft

COMPANY INFORMATION:

Vicomsoft

4/5,K/15 (Item 1 from file: 613)

DIALOG(R)File 613:PR Newswire

(c) 2003 PR Newswire Association Inc. All rts. reserv.

00115212 19990518LATU054 (USE FORMAT 7 FOR FULLTEXT)

New Server-based Internet Filtering and Web Caching Solution for Schools

PR Newswire

Tuesday, May 18, 1999 11:05 EDT

JOURNAL CODE: PR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

DOCUMENT TYPE: NEWSWIRE

WORD COUNT: 532

LEAD PARAGRAPH:

MOUNTAIN VIEW, Calif., May 18 /PRNewswire/ - Vicomsoft today announced a major upgrade to their popular Internet connection sharing and content filtering software for schools. Internet Gateway version 6, now available for

both Macintosh and Windows, incorporates a new high performance transparent caching server that significantly speeds up Internet browsing for network users. It also includes an Offline Library Mode that allows browsing of cached content while not connected to the Internet. The Internet Gateway implements content filtering based on the CyberNOT list of restricted

sites,
and can be installed and set up in minutes, even by non-technical administrators.

The integrated caching server automatically saves incoming web content on the server's disk, with concurrent delivery to requesting clients' browsers. On all successive requests the content is delivered to network users at high speed, even in classroom environments where many students may simultaneously request the same content. This direct cache-to-browser delivery avoids delays frequently experienced by Internet users.

COMPANY NAMES: Vicomsoft
INDUSTRY NAMES: EDUCATIONAL; NEW PRODUCT DEVELOPMENT; MARKETING; CORPORATE
; COMPUTER HARDWARE; COMPUTER SOFTWARE; INTERNET; NETWORKS; COMPUTERS;
INSTITUTIONS; SOCIAL ISSUES; COMMUNICATIONS TECHNOLOGIES; DATA
COMMUNICATIONS
EVENT NAMES: NEW PRODUCT DEVELOPMENT; PRODUCT LAUNCHES; SOCIAL ISSUES
COMPANY NAMES: Vicomsoft

4/5,K/16 (Item 2 from file: 613)
DIALOG(R)File 613:PR Newswire
(c) 2003 PR Newswire Association Inc. All rts. reserv.

00106189 19990511LATU080 (USE FORMAT 7 FOR FULLTEXT)
World's First Integrated Web Caching Server and Router for Windows
PR Newswire
Tuesday, May 11, 1999 06:52 EDT
JOURNAL CODE: PR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 581

LEAD PARAGRAPH:
LAS VEGAS, NETWORLD+INTEROP, May 11 /PRNewswire/ - Vicomsoft today announced SoftRouter Plus 6.0, the first integrated NAT software router and caching server for Windows. The SoftRouter combines industrial strength Network Address Translation (NAT) software routing technology to connect networks to the Internet with a high performance transparent web caching server that significantly speeds up Internet browsing for network users. SoftRouter Plus is available online for both testing and purchase with prices starting at \$155.

The advanced router functions include: NAT sharing of IP addresses and Internet access that supports up to 2,000 concurrent sessions; Access Control and protocol filtering; a powerful DHCP Server supporting up to 1,000 clients; a DNS caching server for speeding up Internet host location; Multihoming; support for multiple simultaneous networks and NICs; a Remote Access Server allowing incoming connections to a LAN; administrator tracing, Ping and status reports; firewall protection for LAN users and the ability to run as a service on Windows NT.

COMPANY NAMES: Vicomsoft ; TECHNICAL
INDUSTRY NAMES: NEW PRODUCT DEVELOPMENT; MARKETING; CORPORATE;
COMMUNICATIONS SOFTWARE; COMPUTER SOFTWARE; INTERNET; NETWORKS;
COMMUNICATIONS TECHNOLOGIES; COMPUTERS; DATA COMMUNICATIONS
EVENT NAMES: NEW PRODUCT DEVELOPMENT; PRODUCT LAUNCHES; TECHNOLOGY
DEVELOPMENT

COMPANY NAMES: Vicomsoft ;

4/5,K/17 (Item 3 from file: 613)
DIALOG(R)File 613:PR Newswire
(c) 2003 PR Newswire Association Inc. All rts. reserv.

00102218 19990504SFTU056 (USE FORMAT 7 FOR FULLTEXT)
First NAT Software Router to Support QuickTime 4.0 Streaming Media
PR Newswire
Tuesday, May 4, 1999 11:35 EDT
JOURNAL CODE: PR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 435

LEAD PARAGRAPH:
MOUNTAIN VIEW, Calif., May 4 /PRNewswire/ - Vicomsoft, the Internet connectivity specialist, today announced support for QuickTime 4.0 streaming media in SoftRouter, their popular NAT software router for both the Macintosh and Windows platforms. SoftRouter is the first NAT software router to offer transparent support for QuickTime 4.0's "streaming" of live video and audio over the Internet.

Previously, LAN users connected to the Internet through firewalls or NAT routers often experienced difficulties receiving streaming media. Vicomsoft engineers have been working closely with the Apple QuickTime development team to implement a solution that allows multiple LAN users to access video feeds through a NAT router as they would any web site.

COMPANY NAMES: Vicomsoft ; Apple Computer; APPLE COMPUTER INC; EMAIL LTD
INDUSTRY NAMES: NEW PRODUCT DEVELOPMENT; MARKETING; CORPORATE;
BROADCASTING; COMPUTER SOFTWARE; INTERNET; MULTIMEDIA; NETWORKS;
TECHNOLOGY DEVELOPMENT; COMMUNICATIONS TECHNOLOGIES; MEDIA INDUSTRIES;
COMPUTERS; DATA COMMUNICATIONS
EVENT NAMES: NEW PRODUCT DEVELOPMENT; PRODUCT LAUNCHES; PRODUCT APPLICATIONS; TECHNOLOGY DEVELOPMENT

COMPANY NAMES: Vicomsoft ;

4/5,K/18 (Item 1 from file: 640)
DIALOG(R)File 640:San Francisco Chronicle
(c) 2003 Chronicle Publ. Co. All rts. reserv.

10751089
SON'S MAC AND DAD'S PC CAN BE ONE HAPPY FAMILY COMMUNICATION JUST TAKES NURTURING
San Francisco Chronicle (SF) - THURSDAY, September 7, 2000
By: HENRY NORR
Edition: FINAL Section: BUSINESS Page: C2
Word Count: 1,752

MEMO:
MAC Q&A
SPECIAL DAILY REPORT: PERSONAL TECHNOLOGY
Mac Q&A runs the first Thursday of each month. Send questions to Henry Norr at atmac@sfchronicle.com. Please specify what Mac model and what version of the MacOS you're using.<

LEAD PARAGRAPH:
Q: I want to network my blue- and-white Power Mac G3 to my dad's PC, but I

don't have any idea what to do. We would also like to share DSL. How can I do this? Is there a book or a Web site out there that could help me?

A: MacWindows, a site dedicated to peaceful coexistence between its two namesakes, has an online tutorial on cross-platform networking (www.macwindows.com/netbasic.html), but it's probably more complicated than you need, so I'll offer my own advice.

Copyright 2000 The San Francisco Chronicle

DESCRIPTORS: BUSINESS; COMPUTERS; Q&A

... Mac, the two main contenders are Sustainable Software's IPNetRouter (www.sustworks.com/site/prodiprouteroverview.html) and Vicomsoft's SurfDoubler (www.vicomsoft.com/surfdoubler/surf.main.html).

IPNetRouter, which is priced at \$89, or \$44.50 for students and...

4/5,K/19 (Item 1 from file: 647)

DIALOG(R)File 647:CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rts. reserv.

01215864 CMP ACCESSION NUMBER: NWC20000515S0011

Network Services - Vicomsoft Internet Gateway Enterprise Suite 6.6

NETWORK COMPUTING, 2000, n 1109, PG42

PUBLICATION DATE: 000515

JOURNAL CODE: NWC LANGUAGE: English

RECORD TYPE: Fulltext

SECTION HEADING: New and Improved

WORD COUNT: 130

TEXT:

Improved. An unlimited number of your company's networked users can access the Internet using Vicomsoft's Internet Gateway Enterprise Suite. The connections can be of virtually any type-modem, cable modem, DSL, T1 and so on. And direct support for PPPoE (PPP over Ethernet) is included. Internet Gateway has a number of new or improved performance features, including Internet Teaming, which lets you increase bandwidth by combining connections (two modems, or a DSL connection and a modem, for example). Version 6.6 also features Web and DNS caching for improved access speeds. Administrators can control user access with the filter and timer features and can also monitor the system with the remote-administration option.

COMPANY NAMES (DIALOG GENERATED): Vicomsoft

COMPANY NAMES (DIALOG GENERATED): Vicomsoft

4/5,K/20 (Item 2 from file: 647)

DIALOG(R)File 647:CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rts. reserv.

01196147 CMP ACCESSION NUMBER: IWK19990712S0073

Streaming Through Firewalls (What's Hot)

INFORMATIONWEEK, 1999, n 743, PG131

PUBLICATION DATE: 990712

JOURNAL CODE: IWK LANGUAGE: English

RECORD TYPE: Fulltext

SECTION HEADING: Behind The News

WORD COUNT: 122

TEXT:

Vicomsoft now supports QuickTime 4.0 streaming media in SoftRouter, its network address translation software router for Macintosh and Windows. Previously, LAN users who connected to the Internet through firewalls or NAT routers often experienced difficulties receiving streaming media.

COMPANY NAMES (DIALOG GENERATED): Vicomsoft

COMPANY NAMES (DIALOG GENERATED): **Vicomsoft**

4/5,K/21 (Item 1 from file: 696)
DIALOG(R)File 696:DIALOG Telecom. Newsletters
(c) 2003 The Dialog Corp. All rts. reserv.

00671325

Software

ISP BUSINESS NEWS

May 17, 1999 VOL: 5 ISSUE: 20 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: PHILLIPS BUSINESS INFORMATION

LANGUAGE: ENGLISH WORD COUNT: 178 RECORD TYPE: FULLTEXT

IPHighway (www.iphighway.com)

Open Policy Forum 1.0 QoS manager

Status: New

Cost: \$25,000

Contact: Shai Herzog

Pho

ne: 800/964-6965

Available: Q2 1999

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

COMPANY NAME(S): Open Policy Forum 1 0 QoS ; **Vicomsoft**

COMPANY NAME(S): Open Policy Forum 1 0 QoS ; **Vicomsoft**

Set	Items	Description
S1	5	(VICOMSOFT OR VICOM()SOFT)/CO
S2	5	S1 NOT PY>2000
S3	4	S2 NOT PD>20000927
S4	4	RD (unique items)

File 95:TEME-Technology & Management 1989-2003/Nov W5
(c) 2003 FIZ TECHNIK

File 233:Internet & Personal Comp. Abs. 1981-2003/Jul
(c) 2003, EBSCO Pub.

4/5/1 (Item 1 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management
(c) 2003 FIZ TECHNIK. All rts. reserv.

01322047 E99060949273

Bridges, Routers, Hubs. Marktuebersicht. LAN-Switches

(Bridges, Routers, Hubs: new products. LAN-Switches: market survey)

anonym

Markt und Technik, v49, n25, pp57-60, 1999

Document type: journal article Language: German

Record type: Abstract

ISSN: 0344-8843

ABSTRACT:

Neue Produkte der Bridges, Routers und Hubs werden vorgestellt, wie beispielsweise einen Gigabit Ethernet Switch von Hirschmann, einen Switch im 19-Zoll-Format von Hetec, skalierbare Desktop Switch von Cisco Systems, einen SoftRouter mit Web Caching von Vicomsoft, einen Switching-Hub von SMC, einen WAN Access Router von Acend oder ein GBit-SmartSwitch-Router von Cabletron Systems. Eine Marktuebersicht ueber LAN-Switches wird gegeben mit folgenden Angaben: Netzwerktechnik, Switching-Art, Layer, maximale Portsichte, Anzahl der Mac-Adress/Switch, Durchsatzkapazitaet/Port 1000 pps, Switch-Delay, Backplane-Kapazitaet, High-Speed-Backbone-Uplinks, Spanning-Tree, Einsatz fuer virtuelle Netze und Nettopreis.

DESCRIPTORS: COMPUTER SYSTEMS HARDWARE; MARKET ANALYSIS; PRODUCT INFORMATION; LAN--LOCAL AREA NETWORKS; COMPUTER NETWORKS; NETWORK ARCHITECTURE; DATA NETWORK ADMINISTRATION; DATA THROUGHPUT; DATA TRANSMISSION; DATA COMMUNICATION

IDENTIFIERS: LAN SWITCH; Netzwerktechnik; Produktinformation

4/5/2 (Item 1 from file: 233)
DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003, EBSCO Pub. All rts. reserv.

00602503 00MW05-015

DHCP Server 6.5 -- Simple IP address administration

Beckman, Mel

Macworld, May 1, 2000, v17 n5 p50-51, 2 Page(s)

ISSN: 0741-8647

Company Name: Vicomsoft

URL: <http://www.vicomsoft.com>

Product Name: DHCP Server 6.5

Languages: English

Document Type: Software Review

Grade (of Product Reviewed): C

Geographic Location: United States

Presents a mixed review of DHCP Server 6.5 (\$95), a Dynamic Host Configuration Protocol (DHCP) network server from Vicomsoft (800). Explains this server provides network services, including IP address management for TCP/IP. Explains the DHCP server issues IP addresses to end users from a central location. Notes this is a low-priced solution that is capable of running on low-end Macintosh hardware. Features support for multiple address ranges and Ethernet cards and offers remote administration. Criticizes the lack of dynamic DNS support and automatic failover. Complains the interface is awkward to use. Concludes overall this is a good IP management choice for Macintosh networks, despite its lack of advanced features. Received a rating of three-and-a-half out of five. Includes one screen display and one product summary. (kgh)

Descriptors: Network Management; Server; Internet Protocols; Administration

Identifiers: DHCP Server 6.5; Vicomsoft

4/5/3 (Item 2 from file: 233)
DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003, EBSCO Pub. All rts. reserv.

00558464 00MW01-011

Internet-sharing software -- Internet Gateway, IPNetRouter improve high-speed Internet sharing

Beckman, Mel

Macworld , January 1, 2000 , v17 n1 p51, 1 Page(s)

ISSN: 0741-8647

Company Name: **Vicomsoft** ; Sustainable Softworks

URL: <http://www.vicomsoft.com> <http://www.sustworks.com>

Product Name: Internet Gateway 6.5; IPNetRouter 1.4.2

Languages: English

Document Type: Software Review

Grade (of Product Reviewed): B; C

Hardware/Software Compatibility: Macintosh

Geographic Location: United States

Presents a review of two Internet-sharing software programs. Provides a favorable review of Internet Gateway 6.5 (\$249) from Vicomsoft (800) and a mixed review of IPNetRouter 1.4.2 (\$89) from Sustainable Softworks. Likes Internet Gateway 6.5's excellent documentation, network-address translation and DHCP, content filtering, remote administration, and dial-in access. Dislikes its per-user pricing. Rates it four on a scale of one to five. Notes that IPNetRouter 1.4.2 is inexpensive and likes its network-address translation and DHCP. Dislikes its lack of dial-in access, limited administration features, and lack of telephone technical support. Gives it a rating of three on a scale of one to five. Concludes that Internet Gateway 6.5 works best in business environments that can afford to spend around \$50 per networked user, whereas anyone on a stricter budget will welcome IPNetRouter 1.4.2's economical price. Includes one screen display. (CT)

Descriptors: Internet Access; Filtering; Connectivity; Bandwidth; Input/Output

Identifiers: Internet Gateway 6.5; IPNetRouter 1.4.2; Vicomsoft; Sustainable Softworks

4/5/4 (Item 3 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003, EBSCO Pub. All rts. reserv.

00546202 99MW09-016

SoftRouter Plus 6.0 -- Routing software adds Web caching

Beckman, Mel

Macworld , September 1, 1999 , v16 n9 p62, 1 Page(s)

ISSN: 0741-8647

Company Name: **Vicomsoft**

URL: <http://www.vicomsoft.com>

Product Name: SoftRouter Plus 6.0.1

Languages: English

Document Type: Software Review

Grade (of Product Reviewed): A

Hardware/Software Compatibility: Macintosh

Geographic Location: United States

Presents a very favorable review of SoftRouter Plus 6.0.1 (\$190 for five users), a routing software program from Vicomsoft (800). Says that the product solves the problem of wasted bandwidth by storing a copy of repeatedly accessed sites on a local server's hard disk for faster performance. Notes that it features world-class TCP/IP routing and network-administration services equivalent to those in expensive hardware routers. Likes its Web caching, its network address translation and DHCP, its DNS/DHCP integration, its multiple PPP dial-in ports, its RADIUS support, and its virtual Web serving. Says nothing negative about the product. Concludes that it does wonders for Internet performance when multiple users chase the same online content. Thinks that it can be a budget saver since its low per-user pricing makes it affordable for virtually any workgroup. Received a rating of five on a scale of one to five. Includes one screen display. (CT)

Descriptors: Bandwidth; Router; Web Sites; Caching; Networks; Web

Tools

Identifiers: SoftRouter Plus 6.0.1; Vicomsoft

Set	Items	Description
S1	7	(VICOMSOFT OR VICOM()SOFT)/CO
S2	7	S1 NOT PY>2000
S3	6	S2 NOT PD>20000927

File 256:SoftBase:Reviews,Companies&Prods. 82-2003/Nov
(c)2003 Info.Sources Inc

3/5/1

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

02466077 DOCUMENT TYPE: Company

Vicomsoft (466077)
2 Durley Rd
Bournemouth, BH2 5JJ United Kingdom
TELEPHONE: 012-02293233
FAX: () 012-02310241
HOMEPAGE: <http://www.vicomsoft.com>
EMAIL: info@vicomsoft.com

RECORD TYPE: Directory

CONTACT: Sales Department

STATUS: Active

Vicomsoft creates connectivity solutions for Windows and Macintosh computers. It offers gateways, routers, DHCP servers, terminal emulators, and client/server systems. Its extensive list of customers includes Kaiser Permanente, 3Com, the U.S. Army, Pfizer, Linotype Hell, and the BBC.
SALES: NA

DATE FOUNDED: 1982
IMMEDIATE PARENT: BVRP Group

DESCRIPTORS: Communications Interfaces; Network Software
REVISION DATE: 20010506

3/5/2

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

01782688 DOCUMENT TYPE: Product

PRODUCT NAME: Internet Gateway (782688)

Vicomsoft (466077)
2 Durley Rd
Bournemouth, BH2 5JJ United Kingdom
TELEPHONE: () 012-02293233

RECORD TYPE: Directory

CONTACT: Sales Department

Vicomsoft's Internet Gateway is a security and management tool geared to business networks. Internet Gateway connects all network computers to the Internet using a single, secure account. Internet Gateway offers a firewall that eliminates network hacks. Its management features allow users to set access and time controls and to monitor networks in real time. Additionally, Internet Gateway is scalable, allowing companies to increase security coverage as their networks expand. Internet Gateway is offered in four packages: Standard, Plus, Pro, and Education. The Standard package supports 10 concurrent connections; the Plus package supports 25 connections; and the Pro and Education packages support an unlimited number of connections. All of the packages offer DHCP servers, user-defined filters, remote control monitoring, DNS caching, Mac IP/Local Talk support, and multihosting. The Pro and Education packages also offer remote access, fallback, and WebHeader servers. The Education package also includes a one-year subscription to the CyberNOT content filtering list.

DESCRIPTORS: Computer Security; Firewalls; Internet Access; Internet

Security; LANs; Network Administration; Network Software; Schools;
System Monitoring

HARDWARE: Apple Macintosh; IBM PC & Compatibles
OPERATING SYSTEM: AppleShare; MacOS; Windows; Windows NT/2000
PROGRAM LANGUAGES: Not Available
TYPE OF PRODUCT: Micro
POTENTIAL USERS: Cross Industry
PRICE: \$149 and up; depends on version; educational pricing available

DOCUMENTATION AVAILABLE: User manuals
REVISION DATE: 20020308

3/5/3

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

01778109 DOCUMENT TYPE: Product

PRODUCT NAME: SurfDoubler 7 (778109)

Vicomsoft (466077
2 Durley Rd
Bournemouth, BH2 5JJ United Kingdom
TELEPHONE: () 012-02293233

RECORD TYPE: Directory

CONTACT: Sales Department

Vicomsoft's SurfDoubler 7 is a connection application for home network users, allowing three computers to share one Internet account. SurfDoubler 7's firewall protects home computers from network attacks. Its Users and Groups feature allows home networkers to configure access filtering and control settings. SurfDoubler 7 supports the CyberNOT content filtering list, preventing users from accessing targeted Web sites. Filtering also can be applied to newsgroups and file transmissions. Parents can use filtering to prevent children from visiting specific Web sites or from spending too much time online. SurfDoubler 7's Remote Control Application streamlines the management of multiple accounts, allowing home network managers to control access to the Internet. SurfDoubler 7's Connection Teaming feature allows multiple Internet connection devices to be linked, increasing transmission bandwidth.

DESCRIPTORS: Computer Security; Families; Internet Access; Internet
Content Filters; Internet Security; System Monitoring

HARDWARE: Apple Macintosh; IBM PC & Compatibles; Pentium; PowerMac
OPERATING SYSTEM: MacOS; MacOS X; Windows; Windows NT/2000; Windows XP
PROGRAM LANGUAGES: Not Available
TYPE OF PRODUCT: Micro
POTENTIAL USERS: Home Users, Families
PRICE: Available upon request

OTHER REQUIREMENTS: Win 9x+ or System 7.6.1+; PowerPC+ or 100MHz+ Pentium+
CPU required
REVISION DATE: 20020308

3/5/4

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00121127 DOCUMENT TYPE: Review

PRODUCT NAMES: Internet Gateway 6.5 (782688); IPNetRouter 1.4.2 (782661)

TITLE: Internet-Sharing Software: Internet Gateway, IPNetRouter Improve...
AUTHOR: Beckman, Mel
SOURCE: Macworld, p51(1) Jan 2000
ISSN: 0741-8647
HOME PAGE: <http://www.macworld.com>

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

Vicomsoft's Internet Gateway 6.5 and Sustainable Softworks' IPNetRouter 1.4.2 are reviewed Internet-sharing applications for the Macintosh that allow multiple users to share bandwidth when cable modem and DSL connections are used. These connections make multiple megabits per second available, which is more than enough bandwidth for multiple users. Internet Gateway 6.5 and IPNetRouter allow sharing without added hardware. IPNetRouter is the less expensive product, while Internet Gateway provides access control needed by many small companies for network management. Each product can share dial-up connections via modem or ISDN or dedicated connections, including DSL. Both provide network address translation, dynamic IP-address assignment via DHCP (Dynamic Host Configuration Protocol), multihomed Web serving, IP filtering, firewall protection, and dial-on-demand nondedicated connections. Internet Gateway and IPNetRouter are both easy to set up and configure, but Internet Gateway has a much better manual than IPNetRouter, which provides rudimentary read-me files. Internet Gateway is a more advanced product for which users pay on a per-user basis, while IPNetRouter has a flat price for an unlimited number of users. However, Internet Gateway has features suitable for medium- to large-sized user groups, including Web caching, a TCP-server locator, remote administration, and dynamic DNS.

COMPANY NAME: Vicomsoft (466077); Sustainable Softworks Inc (672149)
SPECIAL FEATURE: Charts Screen Layouts
DESCRIPTORS: Apple Macintosh; Broadband Internet Access; Cable Modems; Communications Interfaces; DSL; Internet Access; MacOS
REVISION DATE: 20031016

3/5/5
DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00120252 DOCUMENT TYPE: Review

PRODUCT NAMES: Microsoft Windows (740896); MacOS 8 (701424); SurfDoubler (778109); PC MacLAN Windows (638056); Timbuktu Pro 5.0 (564851)

TITLE: The Mixed-Platform Home Network
AUTHOR: Abel, Amee
SOURCE: Home Office Computing, v17 n10 pTNH2(4) Oct 1999
ISSN: 0899-7373
HOME PAGE: <http://www.smalloffice.com>

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Microsoft Windows, Apple Computer's MacOS 8, Vicomsoft's SurfDoubler, Miramar Systems' PC MacLAN for Windows, and Netopia's Timbuktu Pro 5.0 provide drivers and other types of software that allow users to establish mixed-platform home networks. Such networks allow users to share files or printers among Macintosh computers and PCs. The hardware required is a network interface card (NIC) for each computer; wires to link the NICs to each other; and drivers to make the software aware of the NICs. Software is required to activate the networking features of Windows and the Mac OS, and third-party programs allow sharing of Internet connections, files, and

printers. EtherNet is the most versatile, extensible, and fast cross platform network and is available in 10Mbps and 100Mbps Fast Ethernet configurations. Users can purchase a 10/100 hub so that a mixture of 10Mbps and 100Mbps NICs can be used. Apple systems have always provided built-in networking, but today iMacs and PowerMac G3s use standard RJ-45 connectors, while older Macintoshes have AAUI-15 D-shaped connectors, and require installation of an AAUI to RJ-45 transceiver. Another way to set up a network is through a phone line networking kit which allows connection of two or three systems without any additional wiring.

COMPANY NAME: Microsoft Corp (112127); Apple Computer Inc (114936);
Vicomsoft (466077); Miramar Systems Inc (467308); Netopia Inc
(422932)
DESCRIPTORS: Apple Macintosh; Ethernet; IBM PC & Compatibles; Integration
Software; LANs; MacOS; Operating Systems; Small Business; Windows
REVISION DATE: 20000430

3/5/6

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2003 Info.Sources Inc. All rts. reserv.

00111740 DOCUMENT TYPE: Review

PRODUCT NAMES: FTP Client Pro 2.8 Macintosh (722723)

TITLE: FTP Client Pro 2.8
AUTHOR: Beckman, Mel
SOURCE: Macworld, p54(1) Oct 1998
ISSN: 0741-8647
HOMEPAGE: <http://www.macworld.com>

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Vicom Technology's FTP Client Pro 2.8 is an excellent file transfer protocol utility that speeds up FTP access times from within browser-based applications. Unfortunately, it offers no automatic folder-synchronization tools. The graceful user interface looks and feels much like Apple's Mac OS 8's, and the familiar drag-and-drop interface initiates a file transfer simply by dropping a file into any folder. Remote and local directories can be displayed next to one another to greatly ease the process of synchronizing files and folders, though the lack of an automatic implementation of this is about the only negative comment about FTP Client Pro. The ability to resume interrupted file transfer sessions, create automatic translations, and carry out suffix mapping, in addition to the program's very low price, make FTP Client Pro a must-have for anyone carrying out file transfers.

PRICE: \$50

COMPANY NAME: Vicomsoft (466077)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: Apple Macintosh; Data Communications; File Transfer; Internet
Utilities; MacOS
REVISION DATE: 20010330

Set	Items	Description
S1	1291329	CLIENT? OR STAND()ALONE? OR STANDALONE? OR PC OR PERSONAL(-))COMPUTER? OR WORKSTATION? OR WORK()STATION? OR NODE? OR USER?
S2	1181741	SEND? OR TRANSMIT? OR TRANSMISSION?
S3	6101	PING OR PNG OR PACKET()INTERNET()GROPER?
S4	1150878	(SERVER? OR PROCESSOR? OR HOST? OR NODE? OR PC OR PERSONAL-)COMPUTER? OR WORKSTATION? OR WORK()STATION? OR CLIENT?)
S5	6555	("NO" OR "NOT" OR NON)() (RESPONS? OR ANSWER? OR ACKNOWLEDG? OR REPLY OR REPLIES)
S6	4338531	CONNECTION? OR BUS? ? OR LINK? ? OR COMLINK? ? OR HANDSHAK? OR CIRCUIT? OR LINE? ? OR CABLE? ? OR PATH? OR ROUT? ? OR WI- RE? ?
S7	2187341	DEFECT? OR FAILURE? OR FAULT? OR MALFUNCTION? OR DEFAULT? - OR DETERIORATION OR DEGRADATION OR ERROR? OR INVALID OR INOPE- RATIVE OR BAD
S8	1496380	BACKUP? OR BACK?()UP? OR DUPLICAT? OR SECOND OR SPARE OR A- DDITIONAL
S9	1480449	INITIALIS? OR INITIALIZ? OR START? OR PREPAR?
S10	1778	FAILOVER OR FAIL()OVER OR FALLBACK OR FALL()BACK OR (BACKUP OR BACK()UP)()CONNECTION?
S11	8704	DSL OR XDSL OR ADSL OR SDSL
S12	51	S1 AND S2 AND S3 AND S4
S13	152	S5 AND S6 AND S7
S14	16893	S8 AND S6 AND S9
S15	3	S13 AND S14
S16	0	S12 AND S13
S17	0	S12 AND S14
S18	0	S12 AND S10
S19	0	S13 AND S10
S20	7	S10 AND S11
S21	0	S12 AND S5
S22	0	S13 AND S3
S23	10	S11 AND S3
S24	3	S10 AND S3
S25	2	S14 AND S10
S26	8	S14 AND S3
S27	33	S15 OR S20 OR S23 OR S24 OR S25 OR S26
S28	23	S27 NOT PY>2000
S29	19	S28 NOT PD>20000927
S30	16	RD (unique items)
File	8: Ei Compendex(R)	1970-2003/Dec W1 (c) 2003 Elsevier Eng. Info. Inc.
File	35: Dissertation Abs Online	1861-2003/Oct (c) 2003 ProQuest Info&Learning
File	202: Info. Sci. & Tech. Abs.	1966-2003/Nov 17 (c) 2003 EBSCO Publishing
File	65: Inside Conferences	1993-2003/Dec W2 (c) 2003 BLDSC all rts. reserv.
File	2: INSPEC	1969-2003/Dec W1 (c) 2003 Institution of Electrical Engineers
File	233: Internet & Personal Comp. Abs.	1981-2003/Jul (c) 2003, EBSCO Pub.
File	94: JICST-EPlus	1985-2003/Dec W2 (c) 2003 Japan Science and Tech Corp(JST)
File	434: SciSearch(R) Cited Ref Sci	1974-1989/Dec (c) 1998 Inst for Sci Info
File	99: Wilson Appl. Sci & Tech Abs	1983-2003/Oct (c) 2003 The HW Wilson Co.
File	95: TEME-Technology & Management	1989-2003/Nov W5 (c) 2003 FIZ TECHNIK
File	583: Gale Group Globalbase(TM)	1986-2002/Dec 13 (c) 2002 The Gale Group

30/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

04285982 E.I. No: EIP95112925446

Title: Range of passband QAM-based ADSLs in NTT's local networks

Author: Yamano, Seiichi

Corporate Source: NTT Optical Network Systems Lab, Yokosuka-shi, Jpn

Source: IEICE Transactions on Communications v E78-B n 9 Sep 1995. p 1301-1321

Publication Year: 1995

CODEN: ITRCEC ISSN: 0916-8516

Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 9601W2

Abstract: The use of existing metallic local line facilities is being studied for providing 'video on demand (VOD)' services to residential subscribers across asymmetric digital subscriber lines (ADSL). ADSL carries a high-rate channel in the downstream direction from a central office (CO) to the subscriber, and a low-rate channel in both directions on an existing 2-wire pair. Audio and video signals are compressed by the moving picture experts group's standardized algorithms (MPEG 1 and MPEG 2), and delivered to the subscriber in the high-rate channel. Control (demand and response) signals are transceived in the low-rate channel. This paper presents the line length coverage of ADSL systems given the environment of NTT's local networks. The bit rates in the downstream and upstream directions are assumed to be 1.6-9.2 Mbit/s and 24 kbit/s, respectively. Two types of ADSL systems are considered: transceiving ADSL signals using the plain old telephone service (POTS) line or the basic rate access (BRA; 320 kbaud ping-pong transmission system) line on the same 2-wire pair. 16-QAM, 32-QAM and 64-QAM are compared as transmission schemes. Intra-system crosstalk interference (interference between identical transmission systems) and inter-system crosstalk interference (interference between different transmission systems) with the existing digital subscriber lines (DSL) are estimated. It is shown that the inter-system crosstalk interference with BRA is most stringent, and ADSL with 16-QAM yields the best performance in NTT's local networks. This paper concludes that realizing ADSL with 16-QAM can achieve channel capacities of up to 9.2 Mbit/s for fiber-in-the-feeder (FITF) access systems, but the possibility of applying ADSL to direct access systems is remote except for a restricted short haul use. Some comparisons regarding American local networks are also described. (Author abstract) 23 Refs.

Descriptors: *Digital communication systems; Telecommunication lines; Amplitude modulation; Communication channels (information theory); Algorithms; Telephone lines; Signal interference

Identifiers: Asymmetric digital subscriber line; Fiber-in-the-feeder; Quadrature amplitude modulation; Digital transmission systems on metallic local lines; Plain old telephone service; Basic rate access

Classification Codes:

716.1 (Information & Communication Theory); 723.1 (Computer Programming); 718.1 (Telephone Systems & Equipment)
716 (Radar, Radio & TV Electronic Equipment); 723 (Computer Software); 718 (Telephone & Line Communications)
71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING)

30/5/3 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6417988

Title: Go for automatic: latest physical-layer-management products eliminate manual intervention

Author(s): Panessidi, A.

Author Affiliation: NHC Commun. Inc., Montreal, Que., Canada

Journal: Communications News vol.36, no.10 p.28, 30

Publisher: Nelson Publishing,

Publication Date: Oct. 1999 Country of Publication: USA
CODEN: CMUNA9 ISSN: 0010-3632
SICI: 0010-3632(199910)36:10L:28:ALPL;1-B
Material Identity Number: F947-1999-011
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P)

Abstract: While some matrix cross-connect switches are limited in both size and capabilities, only partially addressing market demands, one in particular has adopted an open architecture that allows total OSS and interface to third-party test equipment while supporting the complete life-cycle management of a network infrastructure. This automated physical-layer cross-connect switch replaces the traditional "patch panel" and is the first to combine voice and data and to support up to 3200 lines and utilize a robotic mechanism to perform cross-connect duties. This new cross-connect technology also includes built-in test ports for quick and easy connection of diagnostic test equipment, as well as **fallback** switching capability as an alternative path to avoid faulty connections. The switch resides at the central office, and its protocol-transparent design allows it to support analog voice, **xDSL**, ISDN, Basic Rate, X.25, Frame Relay, Fractional T1, T1, and E1 lines. Versatile GUI-based connection management software provides unattended local or remote operation. (0 Refs)

Subfile: D

Descriptors: computer network management; telecommunication network management

Identifiers: matrix cross-connect switch; automated physical-layer cross-connect switch; robotic mechanism; analog voice; **xDSL**; ISDN; Basic Rate; X.25; Frame Relay; Fractional T1; T1; E1

Class Codes: D4000 (Office automation - communications); D5020 (Computer networks and intercomputer communications)

Copyright 1999, IEE

30/5/4 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5952201 INSPEC Abstract Number: C9808-1290H-004

Title: A "locate first- route second " heuristic for a combined location-routeing problem

Author(s): Bruns, A.; Klose, A.

Author Affiliation: St. Gallen, Germany

Conference Title: Operations Research Proceedings 1996. Selected Papers of the Symposium on Operations Research (SOR 96) p.49-54

Editor(s): Zimmermann, U.; Derigs, U.; Gaul, W.; Mohring, R.H.; Schuster, K.-P.

Publisher: Springer-Verlag, Berlin, Germany

Publication Date: 1997 Country of Publication: Germany xiii+524 pp.

ISBN: 3 540 62630 1 Material Identity Number: XX96-02441

Conference Title: Proceedings of International Symposium on Operations Research

Conference Date: 3-6 Sept. 1996 Conference Location: Braunschweig, Germany

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: We consider a two-stage facility location problem where on the **second** distribution stage, delivery vehicles operate on routes. The objective is to find the number, size and locations of the depots, together with the allocation of customers and the product flow from the plants to the depots, which minimize the sum of the trunking costs, variable and fixed depot costs and delivery costs, subject to the supply and demand constraints, depot capacities and vehicle capacity constraints. To solve the problem, we present an iterative heuristic which- **starting** with the solution of the location part- **ping**-pongs between a facility location and a vehicle routeing problem until consistency between the solutions of the two subproblems is reached. To get an initial estimate of the delivery costs, we use a approach based on hierarchical agglomerative clustering

methods. The location subproblem is solved using a Lagrangean heuristic, which is based on the relaxation of the supply and capacity constraints. To solve the routing subproblem, we use conventional tour construction heuristics together with some tour improvement procedures, which are also applied to the multiple depot routing problem defined by the set of open depots. (10 Refs)

Subfile: C

Descriptors: goods distribution; heuristic programming; iterative methods ; minimisation; operations research; pattern recognition; relaxation; transportation

Identifiers: locate first- **route** **second** heuristic; combined location-routing problem; two-stage facility location problem; distribution stage; delivery vehicles; customer allocation; product flow; trunking costs; depot costs; delivery costs; cost sum minimization; supply constraints; demand constraints; depot capacities; vehicle capacity constraints; iterative heuristic; vehicle routing problem; hierarchical agglomerative clustering methods; Lagrangean heuristic; relaxation; tour construction heuristics

Class Codes: C1290H (Systems theory applications in transportation); C1230 (Artificial intelligence); C1180 (Optimisation techniques); C1250 (Pattern recognition)

Copyright 1998, IEE

30/5/5 (Item 3 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

4979503 INSPEC Abstract Number: B9508-6250F-262

Title: Traffic forwarding by radio relay in personal communication networks

Author(s): Tassiulas, L.; Weinstein, S.

Author Affiliation: Polytech. Univ., Brooklyn, NY, USA

p.808-13 vol.2

Publisher: IEEE, New York, NY, USA

Publication Date: 1993 Country of Publication: USA 2 vol. 1012 pp.

ISBN: 0 7803 1396 8

U.S. Copyright Clearance Center Code: 0 7803 1396 8/93/\$3.00

Conference Title: Proceedings of 2nd IEEE International Conference on Universal Personal Communications

Conference Sponsor: IEEE; IEEE Commun. Soc.; IEEE Vehicular Technol. Soc. ; IEE; Canadian Radio Common Carriers Assoc

Conference Date: 12-15 Oct. 1993 Conference Location: Ottawa, Ont., Canada

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

Abstract: Base stations for personal wireless communications are ordinarily connected to switching facilities through a **wired** network. This paper examines applications for radio relay of traffic among base stations, particularly as a protective **fallback** or **startup** alternative to **wired** base station networks. We presume that a portion of the PCN access channels are used instead for base station-to-base station **links**. We show, for a simple serving area model, that roughly fifteen percent of the traffic capacity of a **wired** base station network can be salvaged through radio relay if the **wired** network fails. (4 Refs)

Subfile: B

Descriptors: **back - up** procedures; cellular radio; personal communication networks; radio **links** ; telecommunication traffic

Identifiers: traffic forwarding; hexagonal cellular network; personal communication networks; personal wireless communications; radio relay; traffic among base stations; protective **fallback** ; **startup** ; **wired** base station networks; PCN access channels; serving area model

Class Codes: B6250F (Mobile radio systems); B6150P (Communication network design and planning)

Copyright 1995, IEE

30/5/6 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

04394799 INSPEC Abstract Number: B9306-6220W-003, C9306-5630-004

Title: An analog front end for combined high speed data and facsimile group 3 modems

Author(s): Halim, R.; Shamlou, D.

Author Affiliation: Hayes Microcomputer Products Inc., Norcross, GA, USA

Conference Title: Proceedings of the 34th Midwest Symposium on Circuits and Systems (Cat. No.91CH3143-5) p.245-8 vol.1

Editor(s): Michael, S.

Publisher: IEEE, New York, NY, USA

Publication Date: 1992 Country of Publication: USA 2 vol. 1124 pp.

ISBN: 0 7803 0620 1

U.S. Copyright Clearance Center Code: 91-645128/91-645128/92\$03.00

Conference Sponsor: IEEE

Conference Date: 14-17 May 1991 Conference Location: Monterey, CA, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

Abstract: A single-chip analog front end (AFE) for combined 9600-b/s **ping**-pong and facsimile group 3 dial-up modems (up to 14400 b/s) has been implemented. The AFE supports V.17/V.29/V.27 ter transmission modes for facsimile and V.32 9600/4800-b/s **ping**-pong for data, as well as lower speed modem full-duplex **fallback** modes from V.22 bis 2400 b/s down to 300 b/s. It meets all domestic and international requirements while maintaining better than 30-dB worst-case signal-to-noise ratio across the full received signal dynamic range of 48 dB. This mixed switched-capacitor/digital IC integrates 97 stages of analog signal filtering/processing with A/D and D/A converters and 1700 gates of DSP and microprocessor bus interface logic. It occupies 74000 mil/sup 2/ in a standard 3- mu m double-poly CMOS process.

(4 Refs)

Subfile: B C

Descriptors: CMOS integrated circuits; mixed analogue-digital integrated circuits; modems; switched capacitor networks

Identifiers: SNR; analog signal processing; DAC; ADC; A/D convertor; high speed data; facsimile group 3 modems; single-chip analog front end; **ping**-pong; dial-up modems; V.17; V.29; V.27; transmission modes; V.32; full-duplex **fallback** modes; V.22 bis; switched-capacitor; digital IC; analog signal filtering; D/A converters; DSP; microprocessor bus interface logic; double-poly CMOS process; 3 micron; 300 to 14400 bit/s; 30 dB

Class Codes: B6220W (Other stations); B1280 (Mixed analogue-digital circuits); B2570D (CMOS integrated circuits); C5630 (Networking equipment)

Numerical Indexing: size 3.0E-06 m; bit rate 3.0E+02 to 1.44E+04 bit/s; noise figure 3.0E+01 dB

30/5/7 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003, EBSCO Pub. All rts. reserv.

00522601 99IK01-310

Alteon ACEswitch 180 Plus 10/100/1000 Switch

Harbaugh, Logan G

InternetWeek , January 25, 1999 , n749 p32-33, 2 Page(s)

ISSN: 0746-8121

Company Name: Alteon Networks

URL: <http://www.alteon.com>

Product Name: Alteon ACEswitch 180 Plus 10/100/1000 Switch

Languages: English

Document Type: Hardware Review

Grade (of Product Reviewed): B

Geographic Location: United States

Presents a favorable review of the Alteon ACEswitch 180 Plus 10/100/1000 Switch (\$17,995; \$10,995 for ACEdirector), a load balancing switch, from Alteon Networks, Inc. of San Jose, CA (408, 800). Features an eight-port 10/100/1000 switch with RJ-45 jacks and fiber optic SC connectors for each

port which can be configured to **fail over** from the Gigabit SC connection to the 10/100 connection. Intended primarily for load balancing on a LAN rather than supporting Web servers over WAN connections. Says there are two ways to set up the switch: through terminal software or via a Telnet connection. Boasts of easy configuration and ability to provide load balancing up to 256 servers in up to 256 virtual groups. Highlights monitoring of servers in a group through **'ping'** or checking TCP port. Complains, however, of inadequate documentation and highly expensive price. Received a rating of B+ on a scale of A to D. Includes one product summary guide. (wpr)

Descriptors: Switches; Load Balancing; Local Area Networks; Price

Identifiers: Alteon ACEswitch 180 Plus 10/100/1000 Switch; Alteon Networks

30/5/8 (Item 2 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003, EBSCO Pub. All rts. reserv.

00498287 98PK06-442

Self-healing desktops -- Novadigm tool helps brokerage distribute, maintain software

Sullivan, Kristina B

PC WEEK , June 29, 1998 , v15 n26 p95, 108, 2 Page(s)

ISSN: 0740-1604

Company Name: J C Bradford; Novadigm

Languages: English

Document Type: Articles, News & Columns

Geographic Location: United States

Provides a profile on stock brokerage J.C. Bradford & Co., and its solution to provide customers with tax planning services. Says the firm purchased Novadigm's Inc.'s Enterprise Desktop Manager, which allowed delivery of the software update in just a few days. Explains the company also used EDM, an automated software management tool that handles thousands of simultaneous updates, to initiate self-healing software fixes. Adds the company uses EDM to ease WAN congestion. Says after installation was complete, J.D. Bradford & Co. **started** utilizing the frame relay WAN that connected 80 branch offices in 15 states to its corporate headquarters in Nashville. Adds ISDN serves as a **backup connection** method in case of a frame relay failure. Concludes EDM is priced between \$100 and \$200 per client, depending on the network infrastructure and number of clients and applications. Contains one photo. (EB)

Descriptors: Client-Server Computing; Application Development; Stock Market; Management; Software; Taxes; Frame Relay

Identifiers: J C Bradford; Novadigm

30/5/9 (Item 3 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003, EBSCO Pub. All rts. reserv.

00435444 96PK09-013

Auto-router discovery enlivens TCP Suite 100

Phillips, Ken

PC WEEK , September 2, 1996 , v13 n35 pN8, 1 Page(s)

ISSN: 0740-1604

Company Name: Cisco Systems

Product Name: TCP Suite 100 for Windows

Languages: English

Document Type: Software Review

Grade (of Product Reviewed): B

Hardware/Software Compatibility: IBM PC Compatible; Microsoft Windows

95

Geographic Location: United States

Presents a favorable review of TCP Suite 100 for Windows v2.0 (\$199 per license), a TCP/IP protocol stack from Cisco Systems Inc. Runs on IBM PC compatibles with Windows 95. Indicates that TCP Suite 100 combines several

network utilities under common interfaces where they could easily found. Notes that this product's graphical applications include a monitor application that keeps a tally of protocol statistics, ARP cache, and other things; an SNMP agent; and an application that provides Finger, TraceRoute, Ping, and Host Lookup. Praises Cisco's router support, and explains that TCP Suite 100 discovers routers dynamically, without having to fall back on statically defined default routers. Reports that TCP Suite 100 makes it easy to use the NFS client and the FTP client and server, and says it also makes Kerberos security support more user friendly. Includes one screen display. (jo)

Descriptors: Network Management; Administration; Networks; Window Software; Software Review; Router; Data Communication
Identifiers: TCP Suite 100 for Windows; Cisco Systems

30/5/12 (Item 1 from file: 95)
DIALOG(R) File 95:TEME-Technology & Management
(c) 2003 FIZ TECHNIK. All rts. reserv.

01398913 20000305470

Per Voice-over-IP zum persoenlichen Berater. Web-enabled Call Center
Rahlenbeck, E
Network World Germany, v1, n5, pp50, 2000
Document type: Short journal article Language: German
Record type: Abstract
ISSN: 1438-7891

ABSTRACT:

Es wird die Notwendigkeit zukunftsfaehiger, flexibler und offener Loesungen zur Integration fachlicher Beratungen ueber CC-Agenten (Call Center) in eine WWW-Umgebung (World Wide Web) diskutiert: Die Grundvoraussetzung (die Realisierung des gleichzeitigen Sprachverkehrs und Datenverkehrs ueber eine einheitliche Netzwerkstruktur) und die technische Umsetzung mittels Client-Server-Architekturen; die einfachste Form der zwischenmenschlichen Web-Verstaendigung Realtime-Dialog auf Textbasis (oder auch **Fallback**-Loesung) bei nicht moeglicher Internet-Telefonie/VoIP (Voice-over-Internet-Protocol); drei Formen der Sprachtelefonie mit einem Web-faehigen CC in Abhaengigkeit von der Ausstattung des Nutzers; der Quasi-Standard H.323 (zur Unterstuetzung von Sprache und Multimedia-Kommunikation in paketbasierten Netzen); das Media-Blending (der komplexe Vorgang der Zusammenfuehrung unterschiedlicher Medien) als Kernfunktion eines Web-enabled CC; die Einsetzbarkeit von ACD-Anwendungen (Automated Call Distribution) bei Internet-Anbindung; die Einfuehrung hoeherer Bandbreiten durch die Carrier ueber die Festnetze ISDN und **xDSL** (Digital Subscriber Line) sowie ueber die neuen Mobilfunk-Standards GPRS (General Packet Switching Service) und UMTS (Universal Mobile Telecommunications System) und die profitablen Auswirkungen auf die Web-enabled CC; die Architektur einer Herstellerloesung als Beispiel (eine Plattform mit der Moeglichkeit des direkten Anschlusses von IP-Telefonen und Multimedia-PCs sowie der Paketvermittlung fuer Sprache mit Uebertragungsraten wie VoIP, Voice-over-Frame-Relay, ATM und das komprimierte Voice-over-ISDN).

DESCRIPTORS: ASYNCHRONOUS TRANSFER MODE; BANDWIDTH--FREQUENCY; CONSULTATION ; CLIENT SERVER SYSTEMS; INTEGRATED SERVICES DIGITAL NETWORKS; HUMANS; MULTIMEDIA COMMUNICATION; COMMUNICATION TRAFFIC; USERS; OPEN SYSTEMS; PACKET SWITCHING; VOICE COMMUNICATION; SYSTEMS INTEGRATION; TEXT COMMUNICATION; COMMUNICATION PROTOCOLS; UMTS STANDARDS; WORLD WIDE WEB; DIGITAL SUBSCRIBER LINES
IDENTIFIERS: CC--(CALL CENTER); Web-enabled Call Center; Voice-over-Internet-Protocol